

The Dental Digest.

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Original Contributions.

SUGGESTIONS ON DEVELOPING AND CONDUCTING A DENTAL PRACTICE ON BUSINESS PRINCIPLES.

By J. N. CROUSE, D. D. S., CHICAGO.

[Continued from page 389, No. 7, Vol. 1.]

In our last article we said that to be a good dentist required much skill, good judgment, care, enthusiasm, and powers of endurance, all of which are sure to yield good compensation in any line of business. We showed some of the causes why many fail in the practice of dentistry, and especially emphasized the importance of keeping out of debt.

We have urged that to be a good dentist requires varied and unusual ability, and there is no part of dentistry which calls this ability into play so much as diagnosis and prognosis. The diagnosis covers a large field. From childhood to old age there are varied and numerous troubles, calling for the most extensive knowledge and for very careful thought. Happy is the man who can always decide promptly and correctly what each trouble is, and the proper remedy for the same. The child is brought to us too young to answer the questions which, if properly answered, would greatly assist in locating the toothache. In many of these cases the only information that the nurse or parent can give is, that "the child cried all night with pain." The teeth are all decayed; from appearance any one of them might be aching, and the nervous reflex pain in a child is unusually great. So the seat of trouble may be in the opposite jaw from the one indicated. In such cases the surest way is to treat any and all teeth which are suspected of having either a dead or exposed pulp. In this way

you may find the aching member at the first treatment, at any rate, you are sure to find it sooner or later.

The treatment and filling of deciduous teeth is the most unsatisfactory, except that the toothache is stopped, of any service the dentist has to perform. Alveolar abscesses are frequent, both in filled and unfilled teeth. However, after the first period of pain, when the abscess and fistulous opening are once formed, they are not apt to give much trouble. Pus will be discharged through the fistula from time to time, but the child will suffer but little from this. Therefore, it is better to keep these teeth in the mouth, if for no other purpose than to make the permanent teeth occupy their natural position in the jaw. For instance, if the second temporary molar is removed before the sixth year molar is erupted, the latter is almost sure to occupy the position belonging to the second bicuspid, so that when this tooth appears there is no space in the dental arch for it. Again, if there appears to be too little space for the erupting permanent incisors, and the temporary cuspid be extracted to make room, as is frequently done, a very troublesome case of irregularity is likely to be produced, as the permanent cuspid is robbed of its proper space. This is probably the most frequent form of irregularity with which we have to contend, as the incisors and first bicuspid are not forced to their proper places, and the growth of the alveolus and arch is lessened. The result is that the teeth must either be forced back to position by mechanical means, or else some one of them must be extracted to make room for the cuspid which, as regards expression and form of the mouth, is probably the most important tooth in the arch.

A good and safe rule to adopt is to fill and retain all the temporary teeth until the permanent ones are erupted. In this way many irregularities, which would otherwise occur, are avoided; another great service is rendered, for, if the deciduous teeth are extracted or sore, the child acquires a habit of swallowing his food in a half-masticated condition, thus inviting indigestion. Furthermore, this habit, when once acquired, is very apt to continue to adult life, and we believe it is one of the main reasons why so many people have "inherited(?) dyspepsia."

The filling of the temporary teeth is probably best done with cement, notably the oxyphosphate. We believe that this material is more enduring in a child's mouth than in an adult's. One

plausible theory is that the secretions of a child's mouth are always acid, and that oxyphosphate is not affected by acids. If the child is placed in our hands before dental caries has advanced too far, the decay can be checked. The extensive excavating necessary in permanent teeth is not essential here. For, since these teeth, if the pulps are kept alive, are almost entirely removed by absorption, the removal of all softened dentine is rather detrimental than otherwise. Therefore, we would advise frequent renewal of the fillings, rather than to endanger the life of the pulp by a too thorough excavation. And because of the above mentioned absorption, we wish to emphasize the importance of keeping the pulp alive, so that nature's methods may not be interfered with.

If, in the process of filling the child's teeth, advantage has been taken of the opportunities there offered, great good has been accomplished in many directions. In the first place, you have gained the confidence of the child by being truthful and careful to give little pain, and have thus taught him that a dentist's chair is not a place of torture. It is not necessary to insert the dam for these fillings, nor to use all the painful methods necessary in an adult's teeth. To treat a child successfully, we have found it very helpful to call in their assistance; e. g.—to hold bibulous paper in the mouth, help control the tongue, etc., thus interesting them in various ways in the success of the operation. You can soon discover whether or not the child has been treated truthfully by those in charge. If a lie is told to induce him to enter the chair, or if he appears distrustful of everyone, dismiss the attendant, take entire charge yourself, and make it your first business to gain his confidence. We make this a very positive rule. The result is, that when the dental operations are completed, if we have performed our duty wisely and carefully, the child has a much less dread of all dental operations than when he first came. This dread has usually been created by the false and exaggerated stories told by older children to frighten him. If the education has been wisely administered it is not limited to the child, but the mother has also benefitted thereby.

From time to time during the operations both the child and mother should be instructed as to the care of the teeth. The patient should be thoroughly drilled and then turned over to the mother, who should continue the good work. It is very easy,

by means of premiums, lectures, example, in fact, by any means which the ingenuity of the parent may devise, to accustom the child to brush his teeth often and regularly, and when the habit is acquired, it will continue through life.

[TO BE CONTINUED.]

HEARING RESTORED AFTER TWENTY-FIVE YEARS.

By G. L. BENNETT, D. D. S., CHICAGO.

An incident of practice comes to my mind, which I think might be of general interest. A lady fifty years old, who had been deaf for twenty-five years, called to have some teeth extracted. I took out ten roots and both of the upper wisdom teeth, which latter were apparently sound, but had a deposit of osseous matter forming a nodule on each root. *As soon as the teeth were removed the patient's hearing returned, and she said at the time she felt something give way and a pressure removed that she had experienced for many years.* This happened two years ago and her hearing is still good. She is now wearing a full denture and is a very grateful patient.

All of which shows that the best practice is not to retain apparently sound teeth for crown and bridge-work, without knowing what is on their roots.

DANGERS OF CHLOROFORM NARCOSIS IN DIABETIC PATIENTS.—Baixer calls attention to the dangers of chloroform in diabetic patients, basing his remarks on three cases of his own and other cases in the literature. On recovering from the narcosis the patients may feel all right, but in twenty-four to forty-eight hours they experience a sense of inquietude, then of hebetude, which passes into coma, in which state they very often succumb. Nothing characteristic is discovered at the necropsy. The author has been able to find acetone and acetic acid in the intestines, even in non-diabetical patients. As chloroform in diabetic patients—perhaps by some yet unknown change in metabolism—may give rise to dangerous secondary symptoms ending in coma and death, the author thinks the existence of diabetes is an absolute contra-indication to chloroform narcosis.—*Centralb. f. Chirurg.*

THE LOWER THIRD OF THE FACE—ITS REVELATION OF CHARACTER.

BY B. J. CIGRAND, B. S., D. D. S., CHICAGO.

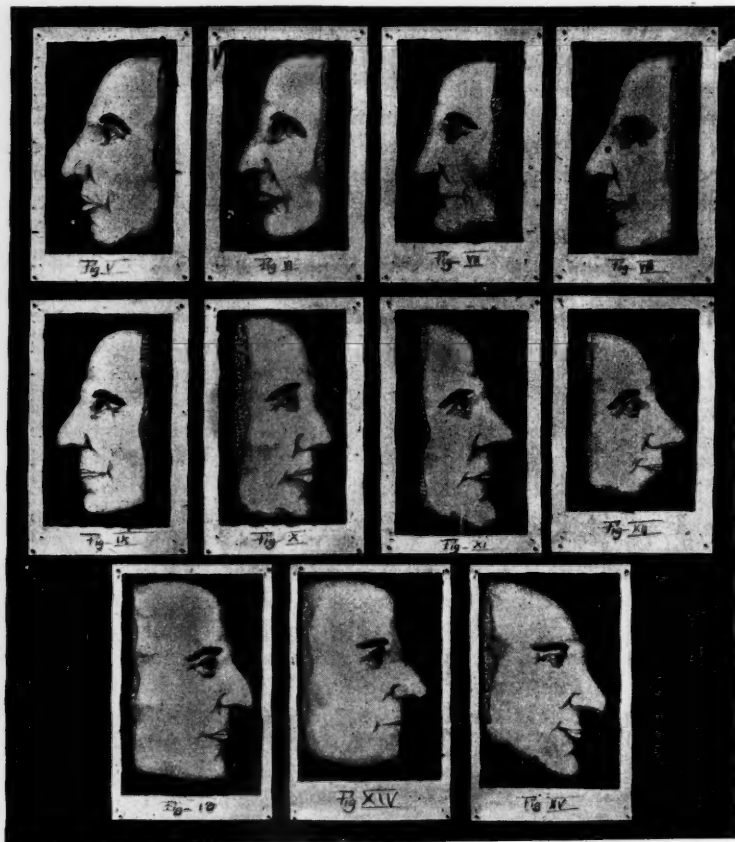
[Continued from page 397, No. 7, Vol. 1.]

An upper lip which is short and fails to cover the teeth and gums, as in Fig. 5, indicates approvativeness. This lip is seen on people of a vain disposition; they are mortified by censure and greatly elated by words of commendation; they are too fond of praise, and delight to be flattered; to blame them wounds their feelings beyond reason. People of this index are so sensitive to criticism that they shun public office or any great public trust. Imagine a Caesar or Napoleon with a short upper lip and half-open mouth; could you dream of Jefferson, Franklin or Lincoln with this gaping mouth? These lips no man had who served in the armies of Napoleon, for he made it a rule to promote none who could not close his mouth. If you have a secret which you wish to give, see to it that the open-mouthed friend does not receive it, since with him it could not long remain.

The lips of contempt or scorn are familiar to us all, but to be certain that you may recognize the pessimist of society I designed Fig. 6. Contempt protrudes the lower lip and draws down the corners of the mouth. People of this lip are naturally inclined to fault-finding; they long to provoke the ill-will of those about them; they delight to abridge the pleasure of their friends, and have a cold, repulsive and antagonistic bearing. These are the lips which make sour the lives of the immediate community. If their possessors attend a family picnic they are objecting to every agreeable move that is contemplated; they take part in those games and festivities only which they propose, and are often heard saying: "If you don't play my game I'll have nothing more to do with this crowd." In short they are the "rule or ruin" kind, and when they are eliminated from society, they are to be seen in some penitentiary. The most telling example that can be found of this lip is to be seen on Richard Pendergrast, the assassin.

The thin and illy-defined lip, as seen in Fig. 7, denotes a cold, unloving nature. Industry, love of order, precision, house-wifery are there in unmistakable language. This class of people are unsocial and prefer to live alone; it bores them to have companion-

ship with any one; they are given to seclusion, they form but few attachments, and manifest but a sparing degree of affection for any person. They are the class of people who have no time for recreation and are incessantly employed. Needless to say they



are selfish and dream of hoards of money. We can expect such a lip in miserly persons. Andrew Johnson's lip has marked traces of this nature.

When the lips are full and well-rounded, as in Fig. 8, it exhib-

its the fact that affectionate and most loving thoughts engage the mind. Mothers who love their children to such a degree that it approaches worship, invariably have this lip. This lip is most common to the female sex. Warm-hearted sympathy is its potent language. Though these lips signify that their possessor worships Cupid, they are nevertheless emblems of purity, and are seldom seen on vicious and crouching countenances. The model mouth of the Greek Venus is of this beautiful shape. Mrs. J. A. Garfield displays these lips, and her tender love for those about her corroborates the silent evidence of her mouth.

The mirthful lip is well proportioned; the middle line is equally serpentine on both sides of the median line, as in Fig. 9. This lip seems to be as the Germans say, "limber and quick," and is usually accompanied by a glib tongue. Voltaire's lip is a familiar illustration.

THE CHIN AND JAW.

You have all recognized the great variety which exists in the forms and quality of the chin. It may be prominent or retreating; long or short; pointed or round; square or dimpled. Few attach any significance to the shape of the chin, supposing that its shape is merely accidental; but those of you who have given the matter serious thought will assert that the chin demonstrates characteristic peculiarities. One of the marked differences between man and beast is the fact that men have a chin while the animals present no such development. We have all noticed that a chinless person is weak-minded and bordering on idiocy or imbecility; all this is certainly strange, yet nature's symbols bow down to nature's command and speak freely.

The prominent chin, as in Fig. 10, always depicts a positive character, and can be seen on persons noted for resolution, perseverance and executiveness. These people are prone to control and command others, and to make external circumstances bend to human powers. Courage and fortitude are here clearly stamped. They are persons who enter a battle to "fight to a finish," and the fight is never finished until they are the victors. This chin is noticeable on Benedict Arnold, who was well known as a fearless warrior.

The sharp and prominent chin, as in Fig. 11, is generally indicative of an inquisitive and crafty nature. This class of people

are apt to take an undue interest in other person's affairs; you will generally discover them in gossip circles and invariably find them to be news-mongers. They are somewhat quick-tempered and manifest a supersensitive nature. They are painstaking investigators, delighting to pry into social matters. They are natural born detectives and gratify themselves most decidedly in shadowing the suspicious people of the vicinity. The eminent Frenchman, Cardinal Richelieu, approaches this character.

The blunt or receding chin, as in Fig. 12, betokens that the owner is inexecutive; lack of force is his failing. These people have no mind of their own and are completely under the subjection of some trusted friend. When this chin is accompanied by a short upper lip, as in Fig. 3, and the forehead is receding, it is a safe criterion of "*non compos mentis*." George III of England may safely be classed as typifying this character, his retreating chin and forehead and the partially open mouth are familiar to all students of history.

The chin and lower jaw are inseparably associated in the physiognomical study of the lower third of the human face. They contribute very liberally toward giving an expression to the upper two-thirds of the countenance, and are the seat of many characteristic symbols.

There are three varieties of shapes common to the inferior maxilla which are deserving of our attention; these are the angular jaw, the round or bull-dog jaw and the infantile jaw.

The angular jaw, as illustrated in Fig. 13, is so called on account of the acute angle which is formed by the union of the ramus and the body of the maxilla; and it is surprising how few matured individuals present this well-proportioned jaw. This jaw is most common in man, and it is an earnest indication of firmness and determination. Men with this jaw often pursue their ends with a reckless yet stern disregard for their physical welfare; nothing can turn them aside from their purpose, and they attain success by means of their great energy, perseverance and endurance, rather than by forethought or deep scheming. They are men of the field, rather than of the chamber. They are observers rather than thinkers, and know no word like fail. Their will power is most active and they are the acknowledged leaders in the sphere of active life. As speakers they use strong ex-

pressions, emphasize many words, and talk to the point. They have no time for sentiment, scarcely appreciate fine art, and laugh at the jingle of poetry. To them this is "a matter of fact world," with no time for rest; their motto seems to be "to do or die." The great Roman, Julius Cæsar, had such a jaw, and his life of conquests bears witness that he was true to his nature.

The round, or bull-dog jaw, as is shown in Fig. 14, is usually seen on persons of a pugilistic tendency, though it is rather common to the stern business man. It portrays a tenacious, selfish, and decisive character. These people are of an antagonistic disposition, finding great pleasure in wielding their powerful fists against some opposing human force. The prize-fighter's countenance is too clearly seen by your mind's eye to need further description. You will admit that the bull-dog and the pugilist bear a most striking resemblance.

The infantile jaw, as Dr. Holmes named it, is seen in Fig. 15. He designated it thus from its analogy to the undeveloped jaw of the infant, having an obtuse angle. People with this jaw exhibit sly and fox-like propensities. They have great will power, but very little courage; they prefer to command circumstances rather than men. They are reserved in the expression of their feelings; they keep their affairs, plans or designs to themselves; are discreet and delight in concealment. They have mysterious, tricky, deceptive and shrewd methods in performing any task. If engaged as generals, they are inclined to practice strategy; they much prefer indirect approaches to a straightforward or open-field encounter. They are usually double-faced in their dealings, being very sweet to your face and quite sour to your back.

In concluding this paper, permit me to remind you of the importance of a fair understanding of the various physiognomical character signs which reveal themselves on the human face; and permit me to impress you with the fact that the investigating and searching elements of the coming generations will devote a liberal portion of their time in the attempt to solve the inviting mysteries of psychology, physiognomy, and other co-related subjects. The mental as well as the physical characteristics of man will engage the undivided attention of rising humanity, and the wonderful discoveries which are yet to come to light, relative to

mental phenomena, will reveal those made in our time on magnetism and electricity. Matters foreign to the peace and general welfare of our race can claim but little time of the coming scientists, for man has awakened to the truth of Pope's remark: "The proper study of mankind is man." And dentists and physicians cannot remain dormant or regardless of this great truth if they hope to be the benefactors of a suffering humanity.

METHOD OF REPAIRING RUBBER PLATES.

BY A. B. CRAWFORD, D. D. S., GRAND RAPIDS, WIS.

Warm some wax and lay on a flat surface, then put parts together, teeth down, and press lightly into the wax. It is then easy to see if the parts come together correctly. Run full of plaster and, if a lower plate, put a stiff wire, bent to fit, into the plaster to stiffen it. When plaster is hard, remove from the wax bed and scrape away the old rubber from a quarter of an inch back of the break down to an edge at the break, then varnish with rubber varnish and let it stand at least two hours to dry. Then press on new rubber with a warm instrument, invest, vulcanize, and finish. By this method undercuts will cause no trouble.

RED LINE ON GUMS.—A red line on the gums is, according to Dr. Andreesen, of Yalta, frequently present in the subjects of pulmonary tubercle. In 800 patients examined, this sign was found in 92, and of these 69 were phthisical patients having bacilli in their expectoration, and other pathognomonic signs. In the 23 others in whom the line was present there was a suspicion of tubercle. In 14 cases of confirmed pulmonary tuberculosis the red line was absent, as was also the case in 33 patients in whom phthisis was suspected. The line may be readily recognized by its intensely red color, and cannot possibly be mistaken for the livid mark visible in persons suffering from chronic affections of the digestive tract. In the majority of cases in which the line existed, the affection was of a somewhat grave and acute character, while those cases in which the line was absent, the evolution of the morbid symptom was slow and comparatively benign. The line gets less when there is a general improvement in the health of a phthisical patient, and again deepens if the pulmonary condition becomes worse. A similar mark is at times observed on the gums of pregnant women; so that under these circumstances the line is of less diagnostic value.—*Dental Record*.

Digests.

Items of Interest for July, 1895.

"How to Vulcanize Rubber plates between Metallic Surfaces," by Dr. A. N. Dick, Woodland, Cal. After the teeth have been articulated and the model buried in the lower half of the flask, trim away all surplus wax from the palatal side of the teeth, leaving the model exposed. Now take a sheet of good modeling compound, rolled to the thickness desired for the plate, dip it in hot water and adjust it to the model and teeth, using a spoon to pour on the hot water till it fits perfectly, so as to develop the lingual rugae. Then trim the edges with a sharp instrument and finish to desired shape of plate. Moisten the surface and burnish on a piece of extra tough tin foil No. 4, first pressing it to position with a bunch of cotton. Burnish very carefully with a smooth round instrument. Prepare the sheet of modeling compound by pressing it between two pieces of glass, thus securing any desired thickness. In preparing the plaster for the mould, pour the required amount of water in the mixing cup and sprinkle the plaster on the water without stirring, till enough of the plaster has settled down in the water to give the desired consistency; by so doing, the air that is in the dry plaster will be floated out, so to speak, and not be carried in the mixture as it would be if the plaster was stirred from the beginning, thus securing a mould free from air bubbles. Then pour and let it set. After opening the flask, pour a little hot water on the base-plate and lift it carefully from the underlying tin foil. If these details are strictly followed out by a skilful hand, the result will be a beautiful lingual surface that will require only the felt and brush wheels to finish it. The file and sandpaper will be needed for the margins. To secure a metallic surface for the palatal side of the plate is equally simple and needs no explanation. However, the same care should be used in mixing the plaster for the model as for the mould, otherwise there would air-holes into which the rubber would be forced through the tin foil and thus make a rough surface. The foil for the palatal side should be No. 4, and the model should be wet when the foil is applied to it. The foil should be applied to the

model with the thumb and fingers without burnishing, as the bur-nisher would injure the model.

"Impressions for Full Cases," by Dr. Wm. H. Steele, Forest City, Ia. The writer does not consider plaster the ideal impression material for full cases, for while it gives a perfect impression, that is not what is desired. If so, why do we scrape the cast before making the die or vulcanizing the rubber plate? We scrape because we want good adhesion, and this cannot be had without giving the plate a heavier bearing on the softer part of the mouth, and we usually accomplish this by scraping the die on the yielding parts. This scraping is guess-work; the longer we have guessed and scraped the better will be our success. While modeling compound might give a good impression of the arch, it is not reliable, as the muscles crowd the material away from the ridge in forcing the impression in place. My method is to first take an impression of plaster; remove and dry off thoroughly; scrape sufficiently to remove the roughness; then take a sheet of modeling compound base-plate; warm and shape it nicely in the warmed impression; invert the cup over a lamp till the compound is quite soft; immediately insert in the mouth and press firmly to place; with a glass of cold water and syringe cool the compound; when set, remove from the mouth and pour the cast; by this method we get a cast that is smooth, easily removed from the impression, and which gives a good fitting plate without any need of scraping.

"Oxiphosphate Covered with Gold or Amalgam," by Dr. W.E. Driscoll, Manatee, Fla. For gold, I fill the cavity with the cement very carefully. When it is hard I drill the necessary retaining points in the cement, and make quite a thin covering of gold. With a good cement, properly managed, mere shells of enamel can be preserved so well in this way that dentists examining them will not suspect their condition, so nearly do they resemble teeth with the normal amount of dentine. When a covering of alloy is used I apply it to the soft cement. I fill the cavity nearly full of cement and press in a block of alloy that has been condensed with pliers. This first piece is securely embedded in the cement, and with a smooth, round point I make a careful joining of the alloy

to the edge of the cavity. I prefer the soft cement should be present at the edge, but I burnish the alloy solid to the edge, so as to press out all surplus cement. In this way I get a better joint or edge to the filling than if the cement had not touched that part. Then where the enamel is thin I thus prevent the alloy showing through, and I thus give the case the appearance of having never been so frail. In this way I fill a great many teeth where the pulps are badly exposed. Also, I never have used anything to intervene between oxiphosphate and naked pulps; I merely touch them with campho-phenique, wipe dry, and apply very soft cement that will take shape without pressure on the pulp to produce pain.

The Ohio Dental Journal for July, 1895.

"Hints," by Dr. Wm. H. Steele, Forest City, Ia. *Vaporizing Medicine in Root Canals.*—Any of the volatile remedies can be easily and successfully introduced in the root canal in the form of a medicinal vapor in the following manner: The rubber dam being adjusted, the canal cleaned and dried; saturate a pellet of absorbent cotton with the remedy you wish to use and place it *loosely* in the canal; now with an ordinary hot-air syringe force hot air through the cotton; which will vaporize the medicine and carry it to all points of the canal just as successfully as any of the high-priced outfits sold for the purpose.

Repairing Rubber Articles.—When rubber articles in use about the office get torn or punctured they are usually thrown away as worthless, while they can be made as good as new with little expense. If a rubber bulb or section of tubing gets cracked or torn, take a coarse file and remove all dirt around the break, at the same time roughing the surface, put on a little "Major's Rubber Cement," and immediately apply a patch, cut from a piece of heavy rubber dam, and secure it in place until the cement sets. To repair the gas-bag, rough up around the breaks with a file, cement on a patch of thin rubber dam, and when this has set, cement over it a piece of thin, strong cloth.

"Non-Cohesive Gold Foil as a Filling Material," by C. H. Gerish, Exeter, N. H.; read at the Vermont State Dental Society, March, 1895. I will ask your attention to some advantages that non-cohesive gold possesses over the sticky form as a permanent

filling. It is a better stopping because a softer one. Why does a farmer plug the taphole of his cider barrel with a spike made of pine instead of hard wood? Simply because he loses no cider, there being no leakage. The plug must be as soft or softer than the material into which it is driven. Thus, when you put a non-cohesive filling into a tooth, you have similar conditions existing. You will probably agree with me that it is not the most solid filling that preserves, but rather the one that is best adapted to the inequalities of the cavity, especially the marginal walls, the one which excludes air and moisture, and is yet hard enough on its surface to withstand the action of mastication. In all these desirable qualities soft foil stands foremost. Beyond a certain point you cannot make it hard. Though you will secure a very dense filling, it is like putty; though you work it ever so long, when you have finished your labors it is still putty. You have not changed the character of the material; you cannot pound the life out of it. Again, the mechanical arrangements of the cylinders is more conducive to a perfect stopping.

My method of preparing and working the foil is as follows: I use both Nos. 3 and 4, nothing heavier. Take a sheet and fold two edges together, once, twice, three times, making a ribbon of eight thicknesses of foil, about one-half inch wide; then twist or roll this ribbon, being careful to keep the surface smooth of the coil. Now, with the scissors, cut the same into pieces just long enough to suit the cavity; so that one end of the piece shall touch the floor, the other projecting beyond the orifice. Begin your filling by inserting one of these pieces into a angle or corner of the cavity, so placing it that the cut end of the gold shall beat the bottom of the cavity, and condense into or towards the distal wall, another piece is placed alongside, and so on until you reach the opposing angle or corner. This reduces the size of the cavity. Continue in this manner until the cavity is full. Up to this time you have been using the sides rather than the point of your plugger, but now the point or end of the instrument comes into play by condensing your surplus gold, keeping the same well over the cavity. This is important. Now, with a wedge-shaped instrument you begin to hunt for the weak places, sending it well to the bottom of the cavity, using lateral wedging pressure. This act sends the gold towards the walls of the tooth. Fill up this pit and look for another soft spot. After this take your burnisher

and condense, as only a burnisher can; and here the saving qualities of soft foil appear, for under the burnisher the surplus gold in a great measure disappears. What becomes of it? Every piece of foil composing the filling presents its edge or end to the action of the burnisher, and that instrument has forced, swayed, moulded or moved the plug in the same manner, but to a less degree, than the warm burnisher does your gutta-percha filling, bulging the walls outward towards the walls of the cavity, filling up every inequality, and securing for you a perfect stopping, for the more pressure you bring to bear on the filling the more perfect it becomes. With a cohesive filling, how different is the effect of this instrument. You can make some impression upon the surface, the outside layers of gold, but the mass of the filling does not yield, and your work is finished for good or bad.

Again, non-cohesive foil can be used with a minimum loss of tooth substance, especially in approximal surfaces of the incisors. I believe and practice a free use of chisels and files. Soft gold requires it as much as cohesive, but the principle of wedging enables you to fill without cutting a direct opening to your cavity. Then you may maul and abuse your soft foil, not changing the working qualities thereby; but not so with cohesive, for it responds as quickly, resents any abuse, virtue goes out of it at the first impact of the instrument, and if it is hammered long enough you can get a spring-tempered filling, beautiful in itself but not easy in its surroundings. All this requires room or space, which is often obtained by cutting through the outside, thereby affording the operator a chance to advertise his skill and so fill his heart with pride. This is not true art, for she conceals her methods, and the operator whose patients are recognized by their friends after a sitting is the true artist. Don't try to advertise your skill by showy work, but as much as lieth in you, conceal it.

The Pacific Stomatological Gazette for July, 1895.

"Dental Jurisprudence, Dentist as Expert Witness," by H. R. Wiley, A. B., San Francisco. An expert is a "skilled or experienced person; a person having skill, experience or peculiar knowledge on certain subjects or in certain professions; a scientific witness."

Questions growing out of malpractice suits; and the question of what constitutes fair remuneration for certain professional ser-

vices occasion frequent demands for expert witnesses in the department of dental science as in other professions and sciences. In litigation arising from the practice of dentistry expert witnesses are selected, of course, from the body of qualified dental practitioners, so far as it is possible to do so. The same witness, if he be cognizant of the facts connected with the case on trial, may testify both as an ordinary witness and as an expert; but before giving evidence in the latter capacity his qualification in that respect must be made to appear to the court. The expert witness may, on the one hand, be required to impart information within the lines of exact science, or, on the other hand, he may be required to give an opinion on some question intimately connected with the science or profession, concerning the principle or practice of which he is supposed to possess peculiar knowledge.

In consideration of the facts stated he must undergo a preliminary examination as to his qualification to answer questions touching upon the science or profession under consideration, or to give an opinion concerning facts or conditions intimately connected therewith. In determining the legal capacity of the witness to give expert testimony in the case it was formerly the practice to put him upon his *voir dire*; that is, to administer an oath and give him special preliminary examination as to his qualification; but at present the practice prevails of determining his qualification by preliminary questions upon his examination-in-chief. The direct preliminary examination may be conducted by the attorney for the party who calls the witness and by the court, and a cross examination, more or less searching and not always pleasant, is certain to follow on the part of the attorney for the other side. The question of qualification having been settled, the statements of the witness will receive such weight as his knowledge and experience seem to justify. A positive statement is not always required of the expert witness, and he may give his opinion or impressions as to facts and conditions when the subject matter of the inquiry is such that unskilled or inexperienced persons would be deemed incapable of forming a correct judgment thereon. If served with a subpoena and (when demanded) tendered his necessary traveling expenses, with his legal fee for his first day's attendance, the dentist is bound to obey the summons of the court.

"Professional Ethics," by Thomas Morffew, D. D. S., San Francisco, Cal.; read before the Nevada State Dental Society, June 29, 1895. That the code of dental ethics is much misunderstood among the members of the profession goes without saying, and from this fact the laity cannot but be excused from a general feeling of uncertainty. The code of dental ethics appears to be understood in so many various ways that an attempt at an explanation is satisfactory only to the person whose views are embodied in such a manner as to cause a gentle flow of pleasing thoughts and consequent egotistical applause. Each member of the dental profession—differing honestly, if you please,—has his own idea of what is right and of what should be condemned as wrong. When a thoroughly educated gentleman and a student of dental practice sees fit to move his office from one place to what he considers a more available business locality, and doing so announces to his clientele that such an act has occurred, the majority of the profession at once "jump on him with both feet." This is what is called "advertising." How could any one of the friends and patrons of the D. D. S. know of his change of office unless he either sent them personal notice or allowed a card to be published giving the information desired?

Gentlemen very learned in the profession and great sticklers on the point of ethics and etiquette ask such questions as: "Wherefore the propriety of recognizing the principles of duty applied to dental surgery as constituting a distinct branch of ethical science?" Again: "Are not the rules in ethics which would govern the practitioner the same as in other applications?" There are certain fundamental truths which, of course, underlie all possible applications of ethics; but the adaptation to different conditions of human life call for separate consideration. Ethics as applied to the dental profession involves adaptations which require to be considered apart from the science as a whole. People as a rule, cannot form a true judgment of the merits of a doctor of dental surgery by the character of his work, as can be done with reference to the sister professions of law, medicine and theology. Peculiar responsibilities pertain to the practice of dentistry, aside from those involved in the treatment of difficult cases where the use of anesthetics is required. In the exercise of his profession the dentist naturally becomes more or less

acquainted with the peculiarities of his patients. While it is true that he is not so liable to learn the weakness, faults, vices and family secrets of the patient as does a physician, still he has a very grave responsibility to carry, and one which should call for all the honest manhood which the secrets of the confessional should bind. The rules of dental ethics have a very great moral weight; there are forms to be observed in professional intercourse which are conventional; while it may appear that they have not the binding force which medical etiquette requires, they claim and deserve observance. The common impression that the objects of a code of dental ethics have exclusive reference to the interests of the dental profession is certainly incorrect. The objects are of far more importance to the public welfare than to the operator.

There are a number of men in the profession who are in favor of the abrogation of the dental code of ethics. Such a procedure would not be of advantage to the guild, and would cause great injury, inasmuch as it would leave the status of dentistry in a position from which it was dragged over forty years ago. It is not the question, "Is a dental code desirable?" but that a dental code of ethics should in every way elevate the profession and bring patient and operator nearer—both being the gainer by mutual confidence and friendly feeling. It might be well—in fact the suggestion is made for the purpose of bringing the matter clearly and positively before the members of the dental profession—to change some of the rules in the existing code, or at least, to modify them in such a way that the quack and empiric shall not be allowed to reap the advantages which the unthinking and careless members of society grant them by reason of their advertisements in the public press, or by other methods which the code designates.

The practice of dental surgery, while not a sacred calling in the sense in which this expression is applied to the clerical profession, is one of dignity and honor, and deserves all the attention which its followers can display. It holds out to its candidates the inducements of an honorable pursuit, studies which are not only attractive but which afford ample scope for the mental faculties, labors which may carry with them the satisfaction of careful surgery, and the knowledge that faithful, con-

scientious work has been appreciated by the patient. Combined with all these the fact that there is a large field for acquiring a competency and even wealth, and a fair chance to rise above the level of persons who follow other pursuits in life, is and should be an incentive to study; and in the profession of dental surgery certainly one can always be a student—live and learn.

While the subject of ethics is one of very grave importance, that of etiquette in the dental profession must not be overlooked. In fact they are so closely allied that one cannot well stand without the other. There is the binding force of secrecy as regards all information obtained in connection with professional relations which should never be disregarded. Dentists should be reserved and exercise great judgment in attending to any patient, for reasons which need not be entered into at this time, but which will naturally occur to every practitioner. This is an unwritten law—a law which places the dentist in the position of a father confessor, so to speak; he is the custodian of secrets which, although some might consider them trivial, in the case of a young lady, for instance, if told, would at least cause strained relations between patient and dentist. He is bound to respect the desire expressed by his patient. The sex should not enter into the matter in any way; he is bound in honor to do this, and any right thinking man would consider it a reflection upon his professional character if he was, even incidentally, charged with alluding to the cause of the patient's visit to his office. Aside from the sense of honor, the code affects practitioners of dental surgery mostly in relation to policy. The interests of the public are directly concerned in the agreement which is made between the graduate from the dental college and the oath to which he subscribes. There is a feeling among certain members of the profession that its disciples should be accorded in courts of justice the same rights granted to the medical practitioner, and that private affairs learned during the time the patient and operator are together should not be a matter of either evidence or comment in a court of law.

The Dental Cosmos for July, 1895.

"Trichloracetic Acid," by J. A. Stackhouse, D. D. S., Buffalo, N. Y., read before the Buffalo Dental Association, Nov. 13, 1894. Whether used in the relief of a pericementitis, a general stoma-

titis from any cause, a foul and reeking pus-pocket, or a hypertrophied condition of the gum-tissue, it gives almost immediate good results. The U. S. Pharmacopœia says that its preparation was discovered by Dumas in 1838, and that it is conveniently prepared by treating chloral hydrate with three times its volume of nitric acid, and placing the whole mixture in sunlight until the red fumes have disappeared. The liquid is then distilled, and the portion coming off at 195° C. is pure trichloroacetic acid.

Some three months ago I had a patient suffering from acute gingivitis that I could not alleviate by the usual methods. My treatment consisted in first removing all traces of foreign substance at and below the gum-margins, and treatment with tinctures of aconite and iodine daily on the gums to relieve the pain, subsequently adding acetate-of-morphia paste on pellets of cotton below the gum-margins. This treatment gave temporary relief only; a reaction followed, and his suffering was intense. A brother dentist prescribed a course of treatment which gave the patient almost instant and perfect relief. It consisted in carefully cleansing the pockets containing traces of serous deposits, degenerating food, etc., which in the first place caused the gingivitis and a loose, swollen, and aggravated condition of the gum, with hydrogen peroxid, using this once or twice in a hypodermic syringe, carefully syringing out and disinfecting the pockets. Then drying the gums, a saturated solution of trichloroacetic acid was applied to them, as well as to the pockets, dipping down as deeply as was comfortable to bear. This was sufficient; the patient said relief came almost as if by magic. The gums were further treated likewise,—that is, the pockets were cleansed with peroxid of hydrogen daily for a few days, and carefully cauterized with the acid. All soreness left after the first application.

Another case, a gentleman, aged seventy two, full lower natural denture, with six superior anterior teeth. The superior left cuspid root was partly denuded of gum and covered with serous tartar, again closely adherent to the tooth; the gum was congested, and pus was being exuded from its labial and distal surfaces (the palatal surface being healthy and free from any abnormal condition). After removing all tartar, I proceeded as above, with peroxid of hydrogen, until I got the flow of pus under control. This took me three weeks, for the breaking-down process was very persist-

ent; then upon the same probe I made two applications of the acid inside of a week, and in a few days the arched festoon of gum surrounding the cuspid was found to be healthy and normal.

This trichloracetic acid is, according to circumstances, a powerful escharotic, astringent, stimulant, and refrigerant. It cauterizes almost instantly, and destroys either epidermis or mucous-membrane surfaces, and in its action it does not provoke general inflammation. If the part where it is applied be kept dry and free from saliva, the application is localized to the part thus applied. Some slight pain is attendant, and at once the circumscribed area turns to a bluish white. In about twelve hours afterward a layer, depending much upon the percentage strength of solution and quantity applied, "sloughs off," leaving a granulated surface which readily heals, and here its astringent energies assert themselves. In a few days the erstwhile sore, inflamed, and suppurating pockets, surrounded by loose and flabby gums, are transformed into a healthy ripple of mucous membrane encircling and hugging closely the periphery of the tooth.

"Regulating Teeth, Supplemented by Crown-work, to Cure Dyspepsia," by F. M. Willis, D. D. S., Augusta, Ga. A young lady, about sixteen years of age, presented herself with the following history: Several years ago she had the left lateral incisor and right first bicuspid of the upper jaw extracted by a country dentist, to correct a slight irregularity. The result was that instead of remedying the condition, there was a general settling in of the entire upper jaw, resulting in a much worse condition than the first. The right superior central incisor was the only one of the upper teeth that touched the lower. There was a quarter-inch space between the upper and lower bicuspid and molars when her jaws were brought together. The patient was unable to properly masticate her food, and consequently was suffering from indigestion so badly that she was unable to attend school, and her system was very much run down.

A split-plate, with a piano-wire spring, was made to spread the upper bicuspid and molars. The patient wore this appliance for six weeks, calling once a week to have the spring opened as the case progressed. The upper molars and bicuspid were now directly over the corresponding teeth of the lower jaw, having

been spread about a quarter of an inch. The cuspids occupied about the right position, so the next step was to move forward the central and lateral incisors. A gold band was fitted around the right central, with a spud resting behind the other central and the lateral incisor. The left central and the lateral incisors had rotated somewhat in their sockets, so the spuds resting behind them were bent so as to turn these teeth as they moved forward. A plate was made, covering the molars and bicuspid, with a piano-wire spring resting in a notch in the gold band behind the right central. This appliance was worn for a month. The incisors were now straight in the arch, and were far enough forward to allow them to shut outside the lower teeth. Now when her jaws were closed there was less than one-sixteenth of an inch space between the bicuspid and molars of the upper and lower jaws. The lower molars and bicuspid were badly broken down from decay, some of them having been frequently filled. To put them in good condition and raise their grinding surfaces to articulate with the upper teeth, it was decided to crown them with gold. The molars and second bicuspid were capped in the usual way with gold crowns.

In order to avoid too much show of gold on the first bicuspid a new method was resorted to in crowning them. A gold band was fitted around the tooth, extending about a sixteenth of an inch above the end of the tooth. An impression and bite were taken at the same time by covering the tooth and band with plaster and closing the jaws while the plaster was soft. The band and plaster were removed intact, Melotte's fusible metal poured into the band and a pin stuck into the metal to hold in the plaster. The crown was placed on the articulator, and the bite completed with Melotte's metal and plaster. The plaster was now removed from the band, leaving a metallic surface one-sixteenth of an inch below the top of the band, against which to fit a porcelain top for the crown. In this case an ordinary plain tooth, such as is used in vulcanite work, was selected and ground to fit into the gold band, and the right length to articulate with the upper teeth. This porcelain tip was cemented into the gold band, and the whole removed from the articulator. The fusible metal was heated a little and readily came away from the crown. These crowns were cemented on in the mouth and produced a

nice appearance, as nothing but the porcelain showed when the mouth was opened, the lip and tongue entirely hiding the gold band. A crown of this description is particularly advantageous for the lower molars and bicuspid, especially where they need to be brought up some distance above the natural tooth.

None of the appliances used in this case caused the patient any pain or great inconvenience. She can now masticate very well, and is enjoying better health than for years previously.

"Specific Treatment of Necrosis of the Alveoli and Maxillæ with Aromatic Sulfuric Acid," by Dr. W. A. Mills, Baltimore, Md.; read before the American Medical Association at Baltimore, May 8, 1895. A lady, aged thirty, of nervo-bilious temperament, called for advice concerning a fistulous opening situated at the right side of the superior central incisor, from which was discharging freely a dark-colored pus. Upon examination it was found that the right central, lateral, and cuspid were dead. The patient stated that they had been so for seven years or more, and had never been treated. The case was diagnosed as necrosis superinduced by chronic abscesses. The following was prescribed:

R. Acid. sulfuric aromatic.....2 oz.
Aqua, 10 oz.....M.

To be injected by the patient into the fistulous opening five or six times daily, bicarbonate soda and water to be used as an alkaline mouth wash after each injection. Patient was instructed to report every other day for examination.

At the expiration of two weeks all discharge had ceased. The soft tissues had fallen into the cavity made by the action of the aromatic sulfuric acid upon the necrosed tissue. An incision was made extending from the fistulous opening to the right first bicuspid. The cavity was then packed with absorbent cotton saturated with the following:

R. Acid. carbolic, C. P., $\frac{1}{2}$ drachm,
Tinct. iodine, $\frac{1}{2}$ drachm;
Aqua, 12 oz. M.

The patient was then dismissed, to return next day, when the cotton pledget was removed. The soft tissues having been pushed aside, I was able to see to what extent the bony structure

had been diseased. I found the line of necrosis had involved the right facial surface of the superior maxilla from the left central to the right bicuspid, and upward from the alveolar ridge to the anterior nasal spine, a part of which, with the bony structure around the apices of the dead teeth, had been destroyed. Only sufficient alveolar septum remained to hold them in position. I opened the pulp-canals of the three dead teeth, cleaned, disinfected, and filled them at once. The filling-material was forced through the apical foramina from the posterior surface, and dressed in the usual manner. The patient was then dismissed, with instructions to syringe out the cavity twice a day with the carbolic acid and iodine wash as long as the syringe could be used. Afterward the medicament was to be used as a mouth-wash. In five weeks new bone-tissue had filled the void, and no evidence of the part having been diseased remained, the outline being quite perfect and all the tissues in a normal condition.

Another case. A lawyer, aged forty, of sanguo-bilious temperament, presented the following conditions: A fistulous opening situated to the right of the left inferior cuspid, another to the left of the right inferior cuspid, both openings discharging pus copiously. This condition had continued for over a year, and patient failing to get any relief from many doctors and many medicines, consulted a surgeon, who diagnosed his case as necrosis, caused, the surgeon said, by the toxic effect of mercury or by syphilis. That neither was the case the patient protested most vehemently. He was informed that he would have to be operated upon. The first thing the surgeon suggested was to have all the incisors extracted, in the hope that nature would have a better chance to throw off the sequestrum. The patient had no objection to having an operation performed, but did object most strenuously to having his teeth extracted, as he possessed a beautiful set, perfect in form and arrangement; no filled or dead teeth were present in his mouth, he having taken the greatest care from boyhood to preserve them. He consulted me to find out if I could in some way manage to save his teeth. I suggested the sulfuric acid treatment, which I thought would not only save his teeth, but save him from having to undergo an operation. After consulting with the surgeon, it was agreed that I

should take charge of the case, with the understanding that I was to consult with the surgeon as the treatment progressed, and not under any circumstances to change the treatment without his knowledge.

The treatment in this case was the same as in the other case. After the first day's treatment, the patient came to the office early in the morning with a very distressed countenance, and said he believed I had aggravated the trouble, because the flow of pus had been so great during the night he could scarcely sleep. I assured him it was a good sign, and that the remedy was doing its work well. The first week the teeth became movable and tender to the touch. A vulcanite splint plate was made to hold them in place and protect them from shock during the process of mastication. At the expiration of two weeks all discharge had ceased. Then an incision was made from the left fistulous opening to the right, and the cavity packed with absorbent cotton saturated with the carbolic acid and iodine mixture, as in the first case, and left to remain until the next day. When the pledget of cotton was removed, the following conditions were presented. The line of necrosis was found to have involved the facial surface of the inferior maxilla from cuspid to cuspid, slightly exposing the pulps at the apices of two central incisors. The septa were nearly destroyed; the teeth were only held in position by their attachment to the external or posterior plate of the alveolar process and gum-tissue. The same instructions for injection and mouth-wash were given as in the former case. In six weeks the patient was pronounced cured, the teeth all living and firm, and the continuity of the maxillary outline fully restored.

The advantage of this treatment in the oral cavity over that of surgical operation is, the periosteum is in no way injured, and therefore no loss of the continuity of outline of the bony structures occurs, nor is there loss of teeth through the necessary extraction required in an operation for removal of the sequestrum.

"Systemic Medication in Dental Practice," by Wilbur F. Litch, M. D., D. D. S., Phila., Pa.; read before the Penna. State Dental Society, July 10, 1894. The most important pathological condition in which active systemic medication is advantageous, is active inflammation of the peridental membrane, set up by septic infec-

tion, or by mechanical irritation from confined gases. In a majority of cases it will readily yield to local remedies, but there are many cases where systemic treatment is needed. There are few inflammations not affecting a vital organ more painful, or attended by graver constitutional disturbances. We all know the swollen and throbbing tissues, the quickened pulse, the hyper-sensitive nervous system, the furred tongue, and disordered digestion; the vitiated secretions and arrested excretions; while beyond these more transient departures from the normal loom up the possibilities of such grave complications as necrosis, septicemia, and trismus, and the still graver possibility of a fatal issue. Speaking broadly, there are two classes of remedies which are available in the systemic treatment of inflammatory conditions. First, those remedies which, acting through the nervous forces controlling the circulatory system, diminish the force and frequency of the pulse, and lessen the blood-impact upon the inflamed area; second, those remedies which, by stimulating the secretory and excretory organs, not only divert the blood-currents from the irritated or inflamed area to the organs thus stimulated, but also diminish blood-pressure by the drain established through the increased excretory outpour thus set up. To this class belong cathartics, emetics, diuretics, and diaphoretics. Of the motor-depressant class, first mentioned, aconite and veratrum viride are the best examples; not only do they profoundly depress the circulation, but usually they stimulate the gastro-intestinal, cutaneous, and urinary secretions in a marked degree. Opium, too, though primarily stimulant, is ultimately depressant to the circulation, while at the same time stimulant to the perspiratory function; so that under proper conditions, especially when combined with a relaxing agent like ipecacuanha, and aided by hot foot-baths and copious hot drinks, marked diaphoresis is one of its most usual physiological effects. Also, the fact that in addition to these properties it has the power of diminishing, or even, for a time, abolishing pain through its paralyzing influence upon the sensory nervous system, adds greatly to the advantages, direct and indirect, which follow its employment, and in periodontal inflammation it can, as a rule, be more advantageously employed than any other agent known to the healing art. Another advantage of opium is that, except in cases of intolerance, it is a perfectly safe remedy

to administer, at least to an adult. Therefore, for a dentist's use it is far more practicable and desirable than aconite or veratrum viride, both of which are powerful depressant poisons, not uniform in their actions, but, in cases of intolerance, often producing marked toxic symptoms, even when given in minute doses. This is especially true of aconitine, the agent so much employed in homoeopathic practice, and when given in physiological and not mystical quantities, its effect upon the patient should always be carefully watched throughout the whole course of its administration, which the dentist cannot conveniently do. Opium is indicated not only in the early stages of a formative alveolar abscess as a preventive of pus-formation, but when prevention fails, the patient should, with an occasional saline cathartic to correct its constipating tendency, be kept well under its influence throughout the entire evolution of the suppurative process until the final discharge of pus into the oral cavity. Thus the inflammatory action will be circumscribed, and the danger of its extension to associated tissue, such as the maxillary periosteum, greatly lessened, and—what is very important—pain will be reduced to the minimum.

The alkaloidal derivatives from cinchona bark, especially quinina, are also much used in the treatment of inflammatory conditions. Quinina, among its other physiological effects, reduces the circulation and lowers the temperature. In large doses it is found to check the migratory movements of the white blood-corpuscles through the walls of congested capillaries, and thus to limit or prevent pus-formation. It is certainly a valuable ally in the treatment of inflammatory conditions, especially when these are associated with the malarial cachexia.

Of the antipyretic group, consisting mainly of the coal-tar derivations, of which modern organic chemistry is now so prolific, I cannot speak with much commendation. Antipyrin, antifebrin, antikamnia, quinoline, salol, phenacetine, and a host of others, while doubtless possessing a certain degree of efficacy, are as yet too imperfectly understood to warrant any but the most tentative and discriminating experimentation. They reduce temperature, and some of them relieve pain; but the exact manner of their action is obscure and their administration is not infrequently followed by marked cardiac depression which sometimes ends in collapse.

Nearly all dental disorders, not strictly mechanical in origin, if traced back to their initial impulse are found to be unquestionably constitutional in character. Even dental caries, that *fons et origo* of so many other ills, cannot be excepted. Acid-generating organisms around the teeth are harmful only when those organs are weak or imperfect in structure through the faulty operation of those systemic processes which are necessary to their perfect development and continued well-being. Certainly dental caries cannot be successfully treated when the faulty systemic influences causing it are not rectified. In defective calcification, improvement comes from the restoration of nature's tissue-building powers, not in a substitution for her products and processes. I have small faith in the administration of chemical preparations of lime when the powers of digestion and assimilation are too feeble, or too perverted to properly elaborate those already abundantly present in all healthful articles of food. The true cure goes back to primary causes; it arrests vicious dietetic habits, and brings errant functional activities once more under the guidance and dominion of natural law.

Calcareous deposits around the teeth constitute another prolific source of mischief. They are usually local in origin, and are liable to occur in the healthiest organisms; but in many cases of phagadenic pericementitis the symptoms are but local manifestations of a strictly systemic disorder. Not only does the clinical history of many of these cases fully prove that they are gouty in character, but analyses show conclusively the presence of calcium and sodium urates in the deposits themselves. Therefore, merely local measures, however valuable and necessary, cannot effect a permanent cure. At present the internal administration of various lithium compounds, such as lithium carbonate, tartrate or citrate, is the treatment most in favor. By the free administration of such agents it is thought that uric acid may be oxidized to urea, or that a lithium urate may be found which, being readily soluble, will escape from the system through the various excretory channels without that arrest and deposit in articular and muscular tissues which is so liable to occur when the less diffusible calcium or sodium urates are present to excess in the blood. In conjunction with this class of remedies, saline substances which stimulate the action of the more important excretory organs are of value,

and in acute gouty or rheumatic inflammation colchicum, which in full doses is highly eliminative through its active diuretic and cathartic effects, is much employed. However, all such medication will prove ineffective unless conjoined with a strict dietary, for the most important factor in the causation of the disease is undoubtedly the imperfect oxidation of plasma, due either to defective digestion or assimilative power, or to the use of unhealthful foods and drinks.

Two distinctly contrasted physical types are liable to these gouty deposits around the teeth. Gouty troubles most frequently develop in persons of the sanguineous temperament, high and liberal livers; active in youth, but inclined to indolence after full maturity. Appetite and digestion are usually so excellent that the food supply exceeds the demands of the system for tissue-repair, and such excess as cannot be oxidized or excreted is stored up in the form of fat. Here is an individual who eats much, digests well and exercises but little. His blood is rich in carbon and nitrogen compounds, but as he will not assist in the oxidation and healthful elimination of such foods by taking active exercise, he must suffer many ailments, such as lithemia, saccharine diabetes, albuminuria, etc. The other type is the person of nervous temperament who leads a sedentary life, often in rooms imperfectly ventilated, who eats moderately of food not too well selected, and digests and assimilates imperfectly that which is eaten. Plasma thus imperfectly prepared to take its share in tissue metabolism is, of course, difficult of oxidation, and gouty deposits may be formed. This is especially likely to occur in cases in which there is a gouty or rheumatic history in the family. Such cases are helped systemically by regulation of the diet, by a gradual increase of active out-door exercise, and by great attention to normal breathing. Breathing, especially with women, is shallow, and the lungs but imperfectly dilated, thus greatly hindering the normal oxidizing processes. Such cases, which are far more frequent with women than with men, might be classified as the gout of anemia, as the first mentioned and more common type must surely be regarded as the gout of plethora. In both cases physical inertia is probably the chief factor in the disorders under consideration.

There is an acute form of gouty inflammation of the periden-

tal membrane, which often occurs without appreciable calcareous deposits, and primarily without purulent discharge, and which is precisely analogous to similar inflammations in other forms of connective tissue, and usually will yield readily to the same treatment required for gout elsewhere in the body. In such cases there is a sudden access of inflammation of the root membrane, the tooth becomes exquisitely sensitive to the touch, and often highly responsive to thermal changes through associated irritability of the pulp. These cases are often diagnosed as pulp-congestion with associated inflammation of the root-membrane—the reverse is true,—and pulp-devitalization is frequently advised; a method which, adding to the periodontal inflammation, can hardly cure, even though it relieves the susceptibility to heat and cold. The best treatment here is active systemic medication: lithium, colchicum, salines, associated with a strict dietary, will speedily relieve and restore the affected organ to usefulness.

The loosened teeth and spongy, bleeding gums of the scorbutic diathesis, a condition impossible to cure when local medication is exclusively employed, is certainly systemic in origin. Scorbutic disorders are generally dependent upon a deficiency in the dietary of succulent vegetables or acid fruits, conjoined with unsanitary surroundings and a generally unhygienic mode of life. A diet either too exclusively nitrogenous or made up too largely of starchy food may cause it. Spongy, bleeding gums are often found with women of feeble and fickle appetite, who practically live upon bread and tea. In all such cases, the systemic cause must be sought for, and eradicated by a corrected diet, systematic exercise, and, if necessary, by systemic medication in which vegetable acids figure prominently.

The Chicago Inter Ocean for July 28, 1895.

[NOTE. It is our intention to print from time to time articles taken from various sources, on general hygiene. These may be advantageously read not only by the dentist, but also by his family, and his patients may profit by the hints contained in such articles. The average dentist does not emphasize sufficiently the connection between general good health and good teeth.—ED. DIGEST.]

"Why the Women Fade," copyright, 1895, by Shirley Dare. If

women only knew what beauty and spirit they might carry far into life's latest season, they would not make a virtue of indifference to them. If a woman choose, she can retain the power of love and charming as long as she has the slightest care for it. If she does not, it argues inability of fortune or of opportunity, in some cases indolence, self-indulgence, and, worst of all, stupid unbelief in the necessity or the means for reaching that end. She doesn't believe that her looks are of so much importance, or that ablutions, fresh air, and careful food make so much difference after all, or that physical neglect means physical falling away and final loss.

It is funny how the ugliest possible women bristle up at the insinuation, most delicately studied and skillfully veiled, that their appearance might be improved ever so little. If you want proof of the assertion, dare to approach the next woman with beard and mustache, or a wart with three hairs on her nose, and sound her on the subject of having those charms relieved by the readiest process. She will explode in your face, "Thank you, she is well enough satisfied with her face as it is, and if you don't like it you can dislike it! Her friends find her good looking enough!" which proves how skillfully friends can conceal their firmest sentiments. It is a merciful provision of nature perhaps, that a woman with bristles, and tartar on her teeth, never has the least misgiving as to her first and only place in the esteem of her family and friends, and it would strike her as most unnecessary and rude to suggest that they might think as highly of her and perhaps more warmly if she were free from those drawbacks. It is the women who have been pretty who feel their least shades of defect most keenly, and are ready to take any means to restore their lost bloom.

For the tarnishing of complexion and fading of rose bloom, which might last into the frosts of later days, vitiated air is responsible more than any other cause. Men eat the same food more or less acceptable that women do, but they have more fresh air, hence they keep their freshness of complexion and clearness of eye years beyond the date when their wives and sisters shrivel and turn yellow. Women in cities and country must demand and obtain this pure air anyhow, to preserve their youth. A hundred minute cares go to secure this. In sleeping rooms and all over

the house, an important precaution begins to impress itself on sanitary observers—the necessity of keeping all sinks and waste-pipes closed when not in use. It is an oversight which has been fatal in countless unknown instances, to leave these ducts of foul air always open, bringing the worst air constantly into living and sleeping rooms. The infection of air, food and drink by this hitherto unsuspected cause is frightful. The best nurses and doctors learn that it is no longer safe to leave milk for children or sick persons in the standing wash basin to keep it cool, for fifteen minutes' absorption of the air given off by the waste vent will infect anything eatable or drinkable with vile, often with deadly vapor. Cases multiply of diphtheria and grip, unerringly traced to infection in this way, and if solids are so infected, how much more is the air, that delicate, sensitive fluid, which imbibes putrescible vapor escaping from slime-lined pipes and deeper receptacles of waste. It is only necessary once to inhale the air from the waste vent of the most sumptuously fitted porcelain basin or bath to be convinced of this. Undoubtedly nine-tenths of the grip which has broken the forces of society rises from these sources, which repeat at close range the dangers of neglected outdoor drainage. You may scald your sinks and flush your pipes daily, but they can never be anything but carriers of offense so long as matter and wastes remain capable of easy, almost instant decomposition, as they are in hot weather. The rule in regard to wash basins and bath tubs is to keep the stoppers in the bowls and clean water standing over them when not in use, no waste water to be left in them, but emptied and rinsed at once. The safety vents are sealed by merely laying a piece of wet paper over them, which adheres for hours.

Soiled clothing is another menace to purity of air in private rooms. Closets where hampers and bags of soiled linen and boots are kept are anything but savory. Anything soiled by sickness, however slight and natural, should at once be thrown into water to soak until cleansed. A deodorizer and disinfectant in some degree readily attainable in country houses is strong suds from common soft soap. More epidemics every year are caused by accumulated minor neglects than anyone dreams, and the low health of many families would marvelously improve by attention to these niceties of domestic habit.

Next to their enervation from want of pure air, women suffer in strength and looks for want of nourishment. I do not say for want of clean and eatable food, but for want of nutrition enough to carry on the work of life and resist the influences which hurry forward age and decay. American women do not eat meat enough to keep up their nerve force. They have been living on various mistaken principles of diet, which agree in being the worst under the circumstances. The woman with plenty of servants, whose sole duties comprise themselves in shopping and paying calls, indulges herself in rich salads, dressings, and made dishes. The overworked housekeeper, who needs to conserve every particle of her strength, takes the dangerous opinion that the less she eats the better, and very likely cuts off meat the first thing from her meager fare. Nervous and run down women who use their brains will find no tonic equal to the best modern doctor's prescription of half a pound of broiled beefsteak twice a day, or at each meal. Of course, the woman who has been starving herself for years is aghast at the idea, which to her savors of gross overfeeding. Two generations of women before her have been sapping the vitality of their descendants by the same foolish sentiment, and the idea that meat is too strengthening, and the neurotic woman of today pays the penalty. Her hollow eyes and cheeks and the fine wrinkles of her skin, the sunken chest and whitening hair betray her low vitality. Food supplies force; fresh animal food supplies nerve force, as nothing else is able to do. To eat heartily of meat, with the usual mixed fare of vegetables, cereals and sweets, is naturally quite beyond any capacity except that of a hunter, farmer or workman.

Possibly a bilious condition prevents appetite, and this must be broken up by appropriate medicine first. Then the best of well-flavored steak or chop, rightly cooked, with crusty bread, coarse bread, oranges or salad, with lemon juice as sole accompaniments, furnish perfect nutrition in exact proportions of meat, cereal, and the acid of fruits. All these should be selected with care, and judging from sorry experience, not one person in a hundred has the slightest judgment what is fit food for one out of health. It is not easy for run down people to take much meat in the beginning to build up, and perhaps it is best to take food in small quantities four or five times a day. Sharp seasoning and

fine table sauces are encouraged to waken the dormant appetite, but appetite or not, the person must eat or fail. It is as unreasonable to say "I have no appetite at all; therefore I will not eat," as to say "I don't feel sleepy nights any more, so I will not go to bed at all." The nervous person who has arrived to the point where she goes without eating is in as risky a condition as if she was doing with one or two hours' sleep a night. Whether she feels sleepy or not she must be made to sleep, and whether she feels like eating or not she must be made to eat—a little perfect food at first, increasing gradually until she craves and relishes her half-pound of cooked beef twice a day. Bear in mind that the half-pound of steak means half a pound of clear, tender, eatable meat, without trimmings or waste, weighing one-half pound after it is cooked. The skeptic as to its value in building up nerve is soon convinced on trial. When after two meals a day of unlimited steak sleep revisits the restless pillow, and the mind which seemed to exist in fragments knits itself together and ideas take new force and coherency, when effort is no longer prostration, one grows very thankful for the brown beefsteak which brings the change. If further conviction is needed, it comes when this diet is interrupted for a day or two, just as one begins to feel its benefit, and one immediately goes back to the old conditions of shaky hands and shakier heart beats, broken sleep, and body and mind only sensible of strain and fatigue. This state of things is brought on by mental and bodily strain plus imperfect food and bad air. Feed nerve and lungs with their appropriate rights of fresh animal food and clean, fresh air, and our poor humanity can bear its portion of grief and struggle without breaking down, without losing its grip on life, and it will not age outwardly before its time, which is past three score and ten. But if a woman will live in close rooms and consider her carpets and curtains more than her complexion, and sleep behind wire screens and Holland blinds which shut the air out like board shutters, she will have a small appetite mornings, play with her toast and coffee, and not care for beefsteak or generous chops. Then she wonders why her hair loses color, and her skin falls into fine wrinkles, and neuralgia and nervous prostration mark her for their prey. Milk will not take the place of meat, neither will eggs, though you eat a nestful. If you undertake to live on vegetable food it takes four

times as much in bulk to afford the same nutrition as fresh meat, and cheese dishes, which the dietarians kindly commend for nutriment, will shortly bring a houseliving woman or man to tumors and sarcomas working such putrefactive changes in the blood as cheese itself requires in time.

The world is learning faster nowadays—at least its medical men are getting hold of the clew to sad disorders which have wrecked generations, and what they say to each other in the medical societies is fit to be known by the laity, especially by women who have the health of households in their hands. Insufficiently fed families send out the epileptic and neurotic degenerates who are no benefit to themselves or the world they trouble. You cannot make men or women broad-minded and charitable so long as they are ill-nourished and bound up, as the old doctors say. You cannot have them cheerful and generous when they are in a bilious state; you cannot have courageous, unselfish natures with the limited force of weak hearts and low circulation; you cannot make devoted, self-sacrificing men or women out of those given to overeating, or fearless, able workers of those who under-eat.

Pure air and strong food are the factors of beauty and use. It is neither easy nor inexpensive to secure them, only it is still harder and costlier to do without them. I hear of a man, not by any means rich, who paid \$250 fee for a single visit from a doctor of notoriety, and \$25 for a small bottle of medicine, only to die a few weeks after. Another workingman, struck down by disease, pays \$5 daily for the visits of two physicians for six weeks, and \$15 for one visit from a good surgeon to tell him that he will never be able to work again, but that he is not to die immediately. A well-ventilated house and cellar, sound bread and plenty of good beef twice a day, with daily bathing, would have saved both these men from knowing a sick day. The mass of people who read these lines and live in boarding-houses or at restaurants cannot command such food as is fit, for much less than \$10 a week table-board, which is beyond nine-tenths of them. The only resource at present is to set up a private frying-pan and gas-stove, when, if one has the right sort of butcher, plenty of good cuts of beefsteak can be accomplished at 12½ cents a pound, provided one knows how to cook it. One pays 50 cents in plain, good res-

taurants for steak which never cost as much, and which is every way satisfactory to support health and strength if you take enough of it. A good deal that is served as tenderloin can be bought at good market prices at 10 or 12 cents a pound, present prices. It is tender, savory, wholesome, and the average man or woman may be thankful to get it as a conscientious cook knows how to serve it. The complete edition of cosmetic lore will come out in seven volumes when published, and three of those will be cookery books. But I doubt the woman is yet born who will write them as they might be written. The high art of food begins with sub-soil drainage and forestry, which cannot be considered in the limits of this paper. But if people knew how much better they might live than they do, under the same conditions and at the same expense, they would hold conventions and express themselves forcibly about it.

The International Dental Journal for July, 1895.

"Theory and Results," by G. Lenox Curtis, M. D., D. D. S., New York City; read before the Central Dental Association of Northern New Jersey. While general surgery and many of its special branches have been brought to a high degree of perfection, where theory and result accord beautifully, there are departments of the great work, of no less importance than the fields now cultivated by the medical profession, which are utterly neglected in the teachings of the medical institutions and in the practice of medical men. The physician considers it beneath his dignity to investigate the mouth as an indicator or cause of disease further than to look at the tongue. He will not refer to the teeth lest he may be classed with the "dentists." Yet the mouth, which is the gate-way to the alimentary tract, the portal through which passes the food which nourishes the body, would seem to demand his first and closest consideration. The completeness of the lack of knowledge on the part of the average physician and surgeon concerning diseases attendant upon or following affections of the teeth, and of the effects, near and remote, which such affections may cause in the organism, is appalling. Many times their patients suffer untold agony or endure prolonged illness because of the doctor's ignorance upon these subjects, which should be among the fundamentals. For much, it not all of this, the medi-

cal institutions of learning are responsible. In the curricula of many of these the teeth, for all the attention that is given to them and their diseases, let alone their anatomical and nervous relations to the remainder of the economy, might as well be foreign bodies. Let us look at a few reports from a plain record of facts.

Nov. 12. A boy, twelve years old, presented for dental operation. Examination showed an overcrowded arch resulting in irregularity of the teeth, which were very poorly calcified and contained many sensitive cavities. In the inferior first molars were extensive amalgam fillings and several disintegrating spots, and the pulps of the superior first molars were dead. The boy was wearing glasses by the order of a doctor, under whose care he had been for a long time for treatment of St. Vitus' dance of the eyes. The boy's eyes, lids, and brows were rapidly and constantly twitching, to the great discomfort of himself and those about him, and he was nervous and irritable. The dentist's experience showed him the relation between the trouble and the teeth, and he advised extraction of the four sixth-years molars. This was done, and in ten days the boy returned, without glasses, and all irregular movements about the eyes had disappeared. He was then taken to the physician, a well-known oculist of good repute, with a statement of what had been done, but the doctor repudiated the idea that the change was owing to the extraction of the teeth, "it was impossible," and claimed that the cure was entirely due to his treatment.

Mr. B., aged fifty-five years, suffering for some time from neuralgia which a dentist thought due to abscess of the inferior left central incisor and inferior left molar, both pulpless. They had been treated for some time, but resisted all efforts to cure disease. On examination, the upper arch was found edentulous, patient wearing an artificial denture. Examination of diseased inferior incisor revealed a canal thoroughly opened. *Fistulæ* opening through the gum near end of root, through which a probe showed extensive absorption of bone. The left lateral and cuspid were found to contain decomposed pulps, and a probe could be passed from the fistula back to the bicuspid below the ends of the roots. The molars were also abscessed, with a fistulous opening through the gum on the lingual surface. The posterior canal was opened through the apex, and the anterior buccal canal was

partially entered and plugged with bamboo. Inferior wisdom-tooth lost. Nov. 27, the central incisor canals were cleaned, sterilized, and filled to the apex with chloro-percha. The canal in the lateral incisor was opened freely and drilled nearly to the apex, but was unable to get nearer than a fraction over one-sixteenth of an inch from the apex. Sterilized and filled with chloro-percha. Patient was referred to dentist for removal of gold crown from cuspid, and to report in four days, at which time examination showed removal of crown; the canal of cuspid had been opened into and dressed with creosote. Dec. 1, canal of cuspid was more fully opened, and a probe passed beyond the apex. Canals sterilized and filled with chloro-percha, some of which oozed out through apical foramen. Cocaine was injected into the gum, and alveolotomy performed. Chloro-percha oozed out through the wound. Cavity in alveolar process around cuspid and incisors burred and curetted away. Debris washed out and wound sterilized Dec. 3. Gums over cuspid considerably swollen. Wound opened with probe, and tincture of iodine injected. Dec. 5, gums less swollen and inflamed. External application of iodine. Anterior buccal canal of molar opened to apex; also posterior canal more freely opened to apex. Search for lingual canals resulted more favorably after drilling considerable dentine away in the floor of the pulp-chamber. Canals found to be small and almost closed by deposit of secondary dentine, but larger upon opening into them. Both were opened to the apex so that a delicate probe passed beyond. All four canals were flooded with carbolic acid; ropes of cotton were packed in, and sealed to disinfect. Next day canals were packed with iodoform. No unusual disturbance around tooth. Dec. 7, all signs of inflammation had subsided, and the teeth were entirely comfortable. The canals were dried and filled with chloro-percha, which was forced through the apical foramen of the distal canals, and oozed through the fistula in the gum. The floor of the pulp chamber was carefully lined with gutta-percha, and the cavity filled with cotton. Case referred to dentist for filling. Under cocaine a bur was passed through the fistula, abscess and debris burred and curetted away; wound washed out with electrozone. Wound washed daily for several days with disinfectant and tincture of iodine. Patient complained all

the time of severe neuralgic pain in left side of face, more especially when tired or at night. Dentist's attention directed to second left inferior molar which was very sensitive, owing to abrasion in mastication and having been ground down so as to make the teeth on plate above occlude properly. Advised to look for irritation of pulp, but did not. Dec. 19, after an exceedingly restless and painful night, patient consulted family physician, who bitterly censured the advice and operations of the dentist and of myself, and demanded that he immediately go to a professional extractor and have the teeth drawn, leaving the posterior molar untouched. It was very difficult to dissuade patient from taking physician's advice. Again repeated necessity of care of back molar; also opened through the gum and curetted around the anterior buccal root of the first molar with a view to blood-letting and to relieve slight congestion around tooth, and also in pulp of back molar. The pain continued and the dentist saw the wisdom of opening into the second molar, which revealed four pulp stones about the size of a pin's head as the cause of the trouble, on the removal of which, along with the entire pulp, all pain disappeared, and the patient was rendered comfortable.

These cases, and many similar ones, simply show how little physicians appreciate the important part which the condition of the teeth plays in disease. There are also many other cases where the dentist discovers the cause of the trouble, it may be with the patient's general health, but he is overruled by the physician, whose authority and knowledge are supposed by the patient to be supreme. The physician, in formulating his theories for the explanation of obscure troubles, entirely ignores the teeth. He has never been taught to appreciate them as a possible element in any disorder except toothache, or perhaps a neuralgia of the face. The medical schools are no aid to him, the text-books give him no inkling of the truth. The teeth are the province of the dentist, and he is too often looked upon with contempt by the doctor as being a one-sided, semi-educated man, when really this very one-sidedness has made him a master in oral and facial diseases. Upon these points he does not vainly theorize, but gets results, and these results are his recommendation to the medical profession.

The Dental Review for July, 1895.

"Duties of Dentist to Patient—Duties of Patient to Dentist," by A. W. McCandless, D. D. S., Chicago; read before the Illinois State Dental Society, May, 1895. The first duty of a dentist to his patient is to study his temperament, as different people must be handled differently. The next step is to gain his confidence, which may be done in the case of nervous people by pretending to accomplish something without causing the least pain. Gradually his apprehension lessens as your gentle manner convinces him that you appreciate his feelings, until you gain his entire confidence and a sense of security comes over him, for he feels that while he is in your hands he will be treated as an animate being that has flesh and blood, and is capable of experiencing pain. When his confidence is gained do not lose it by deceiving him, for it pays to be honest with a patient. If he is apprehensive, reason with him; but if he cannot be persuaded that you are getting no particular pleasure out of his pain, and absolutely refuses to help you in your endeavors to do what is best for him, your duty ends there. It is a waste of time, energy, and vitality to try to benefit such a person. Be firm and refuse to continue with the work; this may make him realize for the first time how he has been conducting himself, and thus shame him into co-operation. A dentist should use all the aids that advanced thought and investigation have given us to relieve pain. Everything about his office should be as neat and attractive as possible, and the disagreeable features should be kept in the background. Send for your patients at least twice a year; in this way you will save them much trouble and expense, and so benefit both patient and operator. It is a dentist's duty to charge well for his services; his patients will think more of him, and he will do his work better.

A dentist should never run down another practitioner, yet some men seem afraid to speak well of a competitor, lest it might cause their patients to leave them and try the other, but it is a grave error. The ordinary individual takes with a great deal of allowance what you may say that is derogatory of another dentist, for he thinks at once that were you not engaged in the practice of the same profession you would not say such disagreeable things. On the contrary, you increase your patient's admiration for your-

self by being big enough and broad enough to speak in terms of praise of other dentists. Some other duties a dentist owes his patients are: To attend and belong to the state dental society, and thus keep abreast of the times; to conduct himself in an ethical and upright manner; to "Be sure you are a member of the Dental Protective Association," for by so doing you find yourself in good society; to subscribe for all the good dental journals; and lastly, to do your very best at anything and everything you undertake, for therein lies the secret of permanent success.

"Duties from a Patient to a Dentist, by a Patient," by Miss Sarah G. Dickinson, a patient of Dr. McCandless. If you find me obscure on this subject, ascribe it to my personal infidelity, and to my utter denial of the existence of aforesaid duties. In the first place, in what I am about to say, I do not refer to that immaculate creature so beautifully portrayed by Dr. McCandless. No, drop this pretty myth, it has no existence. I have to do with practical life. Instead of this charming, genial man who never existed, and never will exist, I betake myself to the dentist of the present age, pure and simple, chiefly simple.

We approach the sacred precinct. As a fitting preliminary of what is to follow, we are first shot perpendicularly into the air for a few thousand feet, and find our dentist located just under the moon. A favorite trick of the profession. The gods only know why they perch so high. Is it that the screams and agonizing shrieks of the victims may fall unheeded on the desolate air, and die away before they reach the pavement? Let us now enter the arena. We are first confronted by odd, ill-matched pieces of furniture, gloomy and heavy. The walls are unadorned save for a framed diploma and a ghastly collection of little heads representing a certain graduating class in which our worthy dentist figured in some remote age. The window panes are opaque from dirt and smoke, and cast a dim, religious light over the place.

When you are settled in the springless chair, and the torture has begun, the following rules should be followed: First, see that you become irritable and peevish the moment you find yourself in the chair, otherwise you astonish the dentist so he cannot do good work. In fact, swear if the apparatus permits. If not

jump often and "spontaneous like." It keeps the dentist following your movements, and makes him gleeful when he overtakes them. Second, when an unusually severe shock is received, clutch the manipulating arm of the dentist convulsively. It flatters him and makes him feel that you will always cling to him thusly. Third, if the rubber dam isn't too tight scream at regular intervals, and inform the operator that he is killing you. This pleases him and makes him kill some more, and by the time he gets through killing you've been a corpse seventy times seven. Fourth, snatch at the rubber every now and then. Tear it off occasionally for the dentist has plenty of them and you may as well get your money's worth. Fifth, always speak of your dentist in society as the Inquisition itself. Sixth, treat him as if he were your lowest menial. What is he, my friends, more or less than a great tool that works all the little tools? Hath a dentist eyes? Hath it ears? Hath it flesh and blood? Doth it feel? Nay, my friends, it hath not, it doth not. The moment a man takes his D. D. S., I care not how manly, how brave, how good, how sympathetic, how tender-hearted, how sweet and amiable he was, that moment he loses all these qualities—he loses his individuality and becomes an automaton—a thing. Seventh, always eat onions or peppermint before visiting your dentist. It keeps him respectful and prevents any undue familiarity arising from the close proximity of patient and operator. Eighth, when suffering from acute pain don't keep still about it. He might possibly pass to the grave without ever knowing just to what degree *Fahrenheit* your suffering arose. Keep him informed. Ninth, if you are a lady and obliged by conventionalities to suppress naughty words, just before they rise to the lips make a grimace at him. It awakens every sympathetic nerve in his body, and he loves you for it. Practice in front of the mirror before you come so as to make your face express all you feel and ever will feel on the subject. Tenth, don't show too much confidence in your dentist. It might make him conceited, and if he feels that you think him a fool, ~~an~~ *ignoramus*, he is sure to do good work for you. Eleventh, don't help your dentist by being patient, long-suffering and brave. Heroines were never born to grace the dental chair. One should not waste heroic qualities in the small bypaths of life; keep them for the highways where they will show. Again,

I say, don't help your dentist. He is paid for it, and well paid. The balance scales might tip in his favor if you were to assist him by your demeanor, he might possibly be better enabled to exercise his skill. But we know from long experience that his object is not to excel as a workman, it is purely mercenary. Let him see this in your attitude, as it acts as a tonic to his shattered system. Twelfth, when you are through, and the dentist modestly presents his bill, act as if he owed *you* something. Find fault with the exorbitant price. Express in good, plain English your inability to see how he could have put in so much time and trouble. A dentist takes pleasure in explaining to a simple, virginal mind the ins and outs of dentistry. Shut the door quickly and not too noiselessly, so that he may be sure you are gone. He'll be so glad. Shake the dust from your feet and try another dentist next time.

It is my firm conviction that these few practical suggestions, if conscientiously carried out, will tend to elevate the standard of dentists in our country.

"A Porcelain Crown," by Geo. W. Schwartz, M. D., D. D. S., Chicago. In making crowns for the anterior teeth in a number of cases it is not desirable to band the roots. Crowns baked to a post are conceded to be the strongest that are easily made. Prepare the root by grinding even just below the free margin of the gum; take a piece of platinum, No. 33 or 34, a little larger than the prepared root, anneal it well, then burnish it up to the end of the root. This is easily done with rubber of an ordinary lead pencil. Place the platinum on the root, hold it in place with the rubber end of the pencil, tap the pencil with a mallet, and you have a good impression of the root. Trim this platinum to the exact margin of the end of the root. Next comes the post, which is easily made; take a piece of platinum plate narrower at the top than the bottom, fold it twice and flow a small piece of pure gold on it to stiffen it and hold the joints together. Put the platinum plate on the end of the root, punch the hole for the post, push the post to place, remove and solder with pure gold, select a plate tooth and fit to the post which has been left long for the pins of the tooth to be pinched around. By this method you can get the exact position you desire for the tooth. Having the tooth in

place, solder the post and tooth together with pure gold. This can be quickly and safely done without investment by putting the gold in place and placing the case in the furnace, gradually heating the furnace until the gold flows. After cooling, you are now ready to restore contour of the lingual surface in porcelain by building up with gum body, and baking. If you wish, after the crown is finished you can remove the platinum from the crown, and you still have a perfect fit and an ideal crown.

"Compressed Air in Dentistry," by C. C. Southwell, D. D. S., Milwaukee, Wis.; read before the Illinois State Dental Society, May, 1895. Following is a brief description of the simple outfit I have in use: attached above my laboratory sink and to the city water service I have an automatic air-pump. This is piped to reach a common kitchen hot-water tank or boiler, which for economy of space I have suspended from the ceiling. This in turn is piped to both laboratory bench and operating chair. I strongly advise against the overuse of rubber tubing. It is unsightly, the unions are seldom tight, and in time it will disintegrate; while metal pipe or tubing once properly united will remain indefinitely.

In the laboratory the chief use of compressed air is soldering. Most gas furnaces depend on a strong Bunsen blast, and a pressure of twenty pounds will do the work perfectly. As applied to the gasoline reservoir of a continuous gum furnace it insures steady combustion, which is very desirable.

Passing to the operating chair and in speaking of its most common use there in my hands, I ask you to witness the support given to the so-called painless dentists and be reminded of what I do not term a weakness on the part of the public. One of the most frequent causes of pain and discomfort during and succeeding the introduction of a large filling is the excessive use of ligatures and clamps for the retention of the rubber dam. These can be dispensed with in almost every instance, to be used only as aids in its first adjustment and in these suggestions I ask no one to make any appreciable departure from present tactics. It is not only true kindness to avoid causing unnecessary pain; it is knightly courtesy. Ligatures placed, crowded, tied and left far under the free margin of the gum can be justly characterized as a

damnable institution. Please use the thread and clamp (habit will compel you to use both to a certain extent) only as conveniences in getting the rubber dam in place; wipe away the excess of saliva with cotton or bibulous paper, then a strong blast of air, warmed if need be, will so dry the surface of the average tooth that the dam will remain in place to the end of the operation, barring accidents that the thread and clamp would not wholly meet.

Warmed air for chip blowing needs no endorsement. Those who have a current of electricity need only call in an electrical expert. A device for inhibiting the current is very easily contrived about the air passing through the metal coil or tube. In the absence of electricity, a coil of metal tubing over the ordinary alcohol flame used for annealing gold will serve admirably, and an ordinary flow of air can be heated in thirty seconds and kept heated. Raise the flame or increase the current, and with a delicate nozzle you have suggested a more perfect and amenable root-canal drier than it has been my pleasure to see in operation. To return the air to the temperature of the room requires but a few seconds, and with this same nozzle, directing a flow of air on a filling which you are finishing with the disk, the usual pain from overheating can be *wholly dispensed with*. For hastening the evaporation of volatiles and reducing the temperature during the use of a bur in the preparation of cavities, or for the extraction of teeth, thus lessening pain, a strong and easily controlled pressure on an ordinary atomizer will prove itself invaluable. As the lowered temperature passes quickly, objection can be raised that without the best co-operation on the part of the patient and a steady, vigorous operating hand, careful work cannot always be assumed when hurriedly prosecuted. However, I have used it with slightly varying success for some time, and speak moderately when I say that in many instances the preparation of troublesome approximal cavities has been accomplished without pain and that marked relief has been given in all others.

Perhaps the chief reason for the failure of crowns and bridge-work lies in the fact that the drying of the foundation is difficult, and to keep it dry is still more so. A steady forcible blast at a pressure of fifteen to twenty-five pounds will not only dry the foundation, but the force of the blast will positively and per-

fectly inhibit the weeping of viscid saliva or blood from the gums. The efficiency of a strong pointed blast in revealing hidden pieces of tartar in pyogenic cavities will appeal at once to the discriminative mind. If you will bring to mind the troublesome approximal cavity which presents itself to the busy operator every day, you can easily realize the soothing effect of a gentle flow of air, at about 100°F., directed into the cavity, beginning as soon as the dam is well adjusted and continued by the assistant until the filling is completed. The effect is simply beatific. In capping pulps the *steady* flow of warm air is a valuable adjunct. The occasional perplexing so-called submarine filling can be made a very simple problem by a well-directed stream of air, for with the dam reasonably well in place it will require but little ingenuity to meet any ordinary emergency. In the fitting of bands I find it of frequent and valuable service in driving out the collection of saliva, or both saliva and blood, enabling me to quickly locate and adjust irregularities.

The British Journal of Dental Science for July, 1895.

"On Malignant Disease of the Peridental Membrane," by A. Hopewell Smith, L. R. C. P. Lond., M. R. C. S., L. D. S. Eng.; reprinted from *The Lancet*. During the course of some recent investigations in the subject of the patho-histology of the peridental membrane, I found among my specimens several marked examples of a new growth intimately associated with and springing from the fibrous periosteum of the teeth—a condition which seems to have escaped the attention of the writers of surgical and dental text-books. These periosteal tumours present on examination appearances which warrant more than a passing notice and afford a subject of great interest and importance to general and dental surgeons alike. The cases under consideration are not absolutely unique, as Mr. Oakley Coles has exhibited a specimen of round-celled sarcoma attached to a molar tooth.

To those unfamiliar with the microscopical appearances of the peridental membrane a brief description of its histology is needful for a larger comprehension of the patho-histology of the disease. The alveolo-dental periosteum is a thin layer of connective tissue which surrounds the roots of teeth and occupies a position between them and their osseous sockets. It consists of bundles of large

white connective tissue fibres arranged chiefly in a transverse direction, and is, in fact, "much like any ordinary fibrous membrane," being freely supplied with blood-vessels and nerves. The cellular elements vary considerably, and include cementoblasts, osteoblasts, osteoclasts, and fibroblasts, together with cells and tissues of an "indifferent" nature. In addition there are occasionally found cementoclasts, calcospherite spherules, and the so-called "lymphatic spaces" described by Dr. G. V. Black. Of all these the fibrous tissues and fibroblasts predominate.

The chief points of interest in connection with these peridental tumours are that they are found in connection with the roots of sound teeth, and that their characteristics are those of round-celled (alveolar) sarcomata.

1. *Seats of occurrence.*—The growth is confined, as its *locus principii*, to the periosteum of the molar teeth, the maxillary being much oftener affected than the mandibular series. It is generally seen to rise from a point situated at the junction of the roots with the body of the tooth.

2. *Microscopical appearances.*—The tumours vary in size from that of a split pea to a small nut, and have a smooth, convoluted, rarely ragged surface. They are firm to the touch and are of a deep red color. The teeth themselves are non-carious and exhibit in their hard parts no traces of disease except slight attrition of their cusps, and (in some cases) absorption of the apices of the roots. They are markedly loose, and signs of chronic inflammation of the periosteum, accompanied by an accumulation of tartar, are often noticed.

3. The *etiology* of the disease is obscure; but there seems to be predisposition on the part of the growths to attack the fibrous membrane of the teeth of females about the period of the menopause. Long-continued and powerful friction, as shown by the wearing down of the cusps, is probably the exciting cause.

4. The *subjective symptoms* point chiefly to long continued sharp pain, increased on pressure, the course of the disease lasting sometimes several months. The pain is excruciating at times, and such as to render necessary immediate extraction of the loosened organ.

5. *Objective symptoms.*—On examining the mouth, at first there is sometimes almost entire absence of swelling or of any usual

inflammatory signs, and the tissues are not markedly indurated. There may be slight suppuration. If the disease is not far advanced diagnosis is only complete after removal of tooth. Later, well-marked symptoms of malignancy appear.

6. *Microscopical appearances.*—The growths consist of masses of cells held together by a fine network of fibrous tissue which is very dense here or very loose there, and is in some places apparently undergoing fibrification or chondrification. In the center of the growth this network is scanty, but the intercellular tissue is conspicuous outside. Vessels are scanty in the center and have extremely thin walls, they ramify among the cells. In the outer portion they are larger (but not dilated) and have normal walls. The cells themselves are for the most part rounded in shape and considerably larger than red blood-corpuscles. They contain one or more nuclei and are devoid of any definite cell wall. Great numbers of spindle cells exist. There is little hæmorrhage into the tissues, probably because of the small size of the growth, and because it has not advanced sufficiently to allow of large hæmorrhages to take place in its substance; but small extravasations of blood corpuscles are noticed here and there. Microscopically the growth is practically indistinguishable from granulation tissue, as has been pointed out by Mr. Knyvett Gordon; considered from a clinical aspect, however, there can be no doubt as to its malignant nature.

The jaw was excised for malignant disease of the antrum by Mr. W. J. Pilcher of Boston, to whom I am indebted for the specimen. The photograph exhibits the first right maxillary molar *in situ*, with its periodental membrane greatly enlarged by the new growth. Infiltration of the surrounding parts has taken place, the gum, antral mucous membrane, and alveolar process being alike affected, and the latter partially absorbed. There is also absorption of the apical regions of both the labial roots. The patho-histology of this growth is identical with that of the isolated cases already mentioned, and from the evidence at hand it seems to be clear that the latter are only earlier stages of the former.

To sum up, it may be said that sarcomatous disease of the periodental membrane is not rare in its earlier forms, but that it is very seldom met with in an advanced condition; and that

removal of the molar tooth fortunately cuts short its career if taken sufficiently early, but if it is allowed to continue it constitutes another starting place for malignant disease of the maxillæ.

Ash & Sons' Quarterly Circular for June, 1895.

"Steam Pressure Gauges." The following instructions for fixing and using pressure gauges may interest our readers:—1. A pressure gauge should not, as a rule, be worked beyond one-half the maximum pressure to which it is graduated; thus a 300 lbs. gauge should be employed for a working pressure of 150 lbs. The pointer of the gauge will then be in a vertical position at the normal working pressure. 2. The gauge should be connected with the steam boiler by means of a water-syphon. The syphon should have a free bore through at least $\frac{3}{8}$ in. 3. The gauge should always be attached above the highest Water Level of a boiler, so as to prevent the admission of impurities from the water into the syphon and the gauge. 4. The gauge should never be attached in immediate contact with the boiler, and, generally speaking, every gauge should be amply protected against excessive heating, as this tends to produce a binding in the mechanism of the gauge, and, moreover, the continuous heating has an effect on the elasticity of the gauge spring and rapidly deteriorates the accuracy of the gauge. The body of the gauge, when firmly touched by hand should never feel uncomfortably warm. 5. A steam-tight joint must be made in the connection of the gauge, as the moisture deposited from the blowing of steam in a defective joint is liable to find its way into the interior of the gauge and interfere with its correct working. The joint should be made on the seat provided for the purpose by means of a lead washer carefully placed in position; for low pressures a leather washer may be employed, but india-rubber should never be used for this purpose. The joint should never be made in the thread of the connection, nor should red or white lead be employed for the purpose, as these materials are liable to get into the passage and obstruct the inlet to the gauge. 6. The taps of pressure gauges should always be opened and closed slowly. Scores of gauges are ruined daily by the careless operation of gauge taps. Where gauges are subject to sudden fluctuations of pressure a check valve must be employed.

The Dental Practitioner and Advertiser for July, 1895.

"Bacteriology and Dental Decay," by R. H. Hofheinz, D. D. S.; read before the Seventh District Dental Society, at Rochester, April 23 and 24, 1895. The bacteria comprise a group of infinitesimal organic unicellular beings, physiologically resembling the fungi proper in many instances. They increase by fission or through the medium of spores. Many kinds of bacteria possess locomotive power, and were formerly classed among infusoria. De Bary classified the chief forms into:

1. Cocci: iso-diametric (elongated, single cells.)
2. Rod forms: cylindrical, less frequently spindle shaped cells, or short chains of the same.
3. Screw forms: rods twisted after pattern of a corkscrew.
- I. To the first group (coccus forms) belong:
 - (a) Micrococci.
 - (b) Macrococci, remarkably large cocci.
 - (c) Diplococci, which arise during the fission of cocci.
- II. To the second (rod forms) belong:
 - (a) Bacilli, whose longitudinal axis is greater than the transverse.
 - (b) Clostridium, spindle shaped cells.
 - (c) Leptothrix, thread-shaped, chains of cells, and many others.
- III. To the third group (screw forms) belong:
 - (a) Vibriones, undulating twists.
 - (b) Spirilla, rigid rods, screw like.
 - (c) Spirochaetes (streptococci, chain staphylococci, grape aggregation.)

According to Henke's analysis, the chemical composition of bacteria is:

Water,	84.81 per cent.
Albumen,	13.03 "
Fat,	1.20 "
Ashes,	0.64 "
Undetermined residue,	0.32 "

According to this a large amount of water is required; therefore, a nutrient solution should be composed of albumen, carbohydrates and small quantities of salt. This is confirmed by the fact that such solutions form the best culture media. The

juices and accumulations of the human mouth at all times present such a medium.

Temperature exerts a great influence upon the vegetation of bacteria. The temperature which permits of the most rapid increase varies, but ranges between 25° – 40° C. (77° – 104° F.). Above 40° the development diminishes, while below 30° they proliferate slowly.

Oxygen also exerts special influence upon the life of bacteria. Three kinds are known in this connection:

1. Where oxygen is indispensable, "aërobic."
2. Where they thrive better without or demand exclusion of air entirely, "anaërobic."
3. The third class thrives with or without.

Acids and alkalies retard the development, with few exceptions. A neutral medium is best adapted to them.

Regarding their action upon lifeless matter, they are divided into: (a) Fermentation bacteria. (b) Color-forming bacteria, (green and yellow). (c) Gas-forming bacteria. (d) Putrefaction bacteria.

The great Dutch scientist, Leeuwenhoek, in 1683, first discovered that small organisms existed in the human mouth. He detected the "spirillum sputigenum." Miller mentions six kinds of bacteria which are always present in the mouth—leptothrix in-nominata, bacillus buccalis, spirillum sputigenum, etc. The process of fermentation going on in the oral cavity offers no exception to the rule that all fermentative and putrefactive processes are conditioned by the presence of living buccal organisms. The action of bacteria upon carbohydrates is the most essential factor to us, as the origin of decay depends upon it. The experiments of Miller have abundantly shown this. His test is easily performed: Take 200 C. C. of fresh saliva, and mix with two grains of starch, and allow the mixture to stand for eight hours at blood temperature. It is filtered and heated to 212° F. to stop fermentation. It is then found strongly acid.

The relative action of micro-organism in tooth decay interests us today more than all other things. All sorts of causes have been assigned for decay of teeth. The following ten are the most important: (1) Depraved juices accumulated in teeth, (Hippocrates, 456 B. C.) (2) Disturbances of nutrition (Galen,

131 A. D.) (3) Inflammation (Hunter, Bell, etc., Heitzman, Bodecker, Abbott). (4) Worms (especially prevalent in China). (5) Putrefaction. (6) Chemical dissolution (Tomes, Magitot, and Wedl). (7) Parasitic theory (Leber and Rottenstein, Milles and Underwood, Black, and last but not least, Miller). (8) Electrolytic decomposition. (9) Diverse causes. (10) Chemico-parasitic influence.

The two most prominent theories of the day are the "Inflammation" theory, advanced by Heitzman, Bodecker and Abbott, and the "Parasitic" theory, advanced by Miller, Black, and others. Bodecker has largely advanced towards Miller's theory. He says: "The modern views of caries are based upon bacteriological researches. Previous to 1882, before bacteriology became a systematized science, the origin of caries was thought to be a mere decalcification of enamel and dentine, but even at that time much valuable work was done." Abbott has also considerably advanced toward Miller's views.

The purely chemical view of decay is out of the question at this date, as no such conditions can be produced by acid alone as the microscope reveals in carious sections. Acids certainly have a decalcifying effect on dental tissues. The identity of a destructive process in the tooth with decay itself can only be established by the microscope. The greatest argument for the parasitic theory Miller has furnished by his experiments in artificial decay.

Magitot has made extensive observations in this direction. Miller asserts that artificial decay can be accomplished so perfectly that the most experienced microscopist cannot tell it from natural. Having seen a large number of his specimens, I can only humbly agree with him. His method of experimentation is very simple. He cuts up a number of perfectly sound teeth, but of different densities, into different sizes, and places them in a mixture of bread and saliva. This mixture he keeps for three months at a temperature of 37° C. After that time he finds all the characteristics of natural decay. All phenomena of so-called white decay are present. If the mixture is allowed to stand until the reaction becomes alkaline, or if the pieces are exposed to the action of different articles of food, such as coffee, tea, tobacco, fruit, etc., all possible shades of color are produced, just as found in the mouth. The characteristics are the same microscopically as those

of natural decay. The canaliculi are filled with bacterial masses, the thickening of Neuman's sheath and swelling of fibrils can be plainly seen. Discoloration seems more prevalent where nitrogenous substances are present.

Atkinson said that all cases of artificial decay could easily be discriminated from natural decay, by the fact that in artificial decay the micro-organisms followed the line of tubules without shrinking into the consolidated intertubular substance. Miller has shown by hundreds of specimens that both in artificial and natural decay the micro-organisms in deeper parts of decaying tissue are confined to the tubules, whereas those nearer the surface gradually liquefy the basis substance, thus producing the caverns which you will see in many of the specimens.

I believe, therefore, that we have reason to assume that dental decay is a chemico-parasitical process, consisting of two distinct stages: First. Decalcification or softening of the tissue. Second. Dissolution of the softened mass.

Having mentioned the process of fermentation in the mouth, I may add that the acid is chiefly derived from particles of amylaceous and saccharine substances which lodge in the retaining places. These undergo fermentation. The fermentation of carbohydrates produces chiefly lactic acid, and this is the chief destroyer of the tissue in its first stage.

The second cause of the caries, the dissolving of the softened tissue, is caused by bacteria. We know through our culture experiments that mouth bacteria dissolve albuminous substances, converting them into a soluble mass. We know that the basis substance of dentine consists of an albuminous substance. The explanation therefore seems easy, and is readily observable under the microscope.

EXTRAORDINARY TEMPERATURES.—A. Jacoby, of New York, is authority for the statement that in the case of a hysterical laborer the bodily temperature reached 65°C .; that later on it hovered for five days around 50°C . Dr. Welch beat this remarkable case by another one in which the temperature was 77°C ., or 171°F . The *Berliner Klin. Wochenschrift* registers a slight degree of doubt by exclamation points and would not believe the statement if it were not for Dr. Jacoby's connection with it. These Europeans are sadly defective in their medical education if it comes to extraordinary and unusual cases of pyramidal magnitude.—*Medical Review*.

Letters.

NEW YORK LETTER.

NEW YORK, Aug. 14, 1895.

To the Editor of the Dental Digest,

MR. EDITOR:—"Canal-Work," as it was delineated by a genuine Jersey Hornet, proved a highly entertaining subject. Prof. J. Foster Flagg was the author of it. Poor DeLesseps came to grief in his enterprise, while others found "millions in it." So the genial Prof. sees millions of success in the practice that he has so fully investigated, including the latest novelty brought out last year by Dr. Callahan, viz., Sulphuric Acid for chemically cleaning the putrescent debris from pulp-canals. Investigation is the only way to establish anything of an exact science, and Prof. Flagg tells us he has done this. For this reason he has the floor. He says enthusiastically and dramatically—so like him—that it is a decidedly rational practice. He fully evinced his former vim, and fairly vibrated with an eagerness that many would do well to try and emulate. We never saw him looking so well; dressed very nattily, white duck trousers, a short, fashionable sack coat, and trimmed in the latest cut of the tonsorial art. Good men don't die young, necessarily. We told him he looked every inch a retired railroad president. He has retired from active practice and gives all his time to the Philadelphia College, with which he has been so long identified. He says he doesn't retract a word of his "New Departure," and his deductions in this last paper have also come with some staying qualities. Prof. Truman called him out to explain why the action of arsenic should not continue its destructive effects on through the apical foramen, and was referred to his, Prof. Flagg's answer some twenty years ago before the American Dental Association. It was, that he had proved by chemists that aside from the portion of the pulp which came into actual contact with the arsenic, in a large number of pulps there could be traced no portion of the arsenic in the tissue. If we recall rightly, in his former statements he did claim that the strangulation of the pulp at the apex cut off further action of the acid. His paper will be read with much interest, and those who know

him will add the pleasant face and figure, which will give additional zest.

Prof. Garretson was a notable figure that came in a very genial way—so great a personal attraction of his—to his defense regarding the use of arsenic, for it was thought that Prof. Flagg left it to be inferred that he regarded it lightly just how long the arsenic might remain in contact with the pulp. Prof. Garretson had so much confidence in his associate, so long in company with him, that he believed he had come to acquire some knowledge of the different degrees of "Resistability" the patient might possess. We would say right here that we are convinced that this big word has a volume of meaning and should become more familiar to us. No one but Prof. Garretson could coin such a term. The larger meaning reduced to our fuller understanding would enter into a greater helpfulness in making a diagnosis. We think this thought is so much left out in this connection that what might be a successful practice is defeated because of it. As a truism, "All discord follows along the line of least resistance." All intelligent dentists have cause to be proud of Prof. Garretson. He said to us, "We are getting older, are we not?" Yes, but like wine, better for the age.

We are more and more impressed with the fact that the ranks of the old timers are rapidly thinning out; we miss them at these yearly meetings. The Hornets have but few gray hairs, the always smiling and genial Stockton being a notable exception, and he has no peer in gray matter. Some of them have more stinging qualities; they are all needed, if the poison is kept out. We were never stung by a hornet but once, and we remember it vividly to this day. When a boy we sat down on a heap of wood shavings in which they had nested, and as soon as they touched us through our thin trousers we hurried away and have never sat on a heap of shavings since. There are some things we cannot forget, and some things which are better forgotten.

One man had good memory at Asbury Park; he said he belonged to New York and had never gone through but one root-canal. For a moment he seemed not a little confused, then came back and gave the year, 1872; (it was not 1492). No, he will not be here the next time that America is discovered. This same man understood Prof. Flagg to say that he had been through *forty-five*

times, but he corrected himself by saying that it might have been twenty-five. This recalls a case reported in the August *International*, with the pictorial illustration of a drill through the side of a root, in connection with the sulphuric acid treatment. We don't surmise that the acid had anything to do with such a deviation.

We were impressed in hearing Prof. Flagg's paper that greater simplicity will come more and more into the future of canal-work, and just here we add that Dr. Crouse's testimony "of twenty-five years' practice and not a failure," goes for more than talk. We cannot understand why anyone wants to fill pulp-canals for future repair; it is not necessary.

We wonder how the "high-school" practitioners of the future will view our teachings. It occurs to us that when these students come on the scene there will be a demand for "high-school" teachers. "Deestrick Skule" education will not count then.

By way of information, we will add here that we think Prof. Flagg's idea of strangulation seems to convey the thought that the pulp dies by the act of strangulation alone, produced by the blood corpuscles causing it to so enlarge that it cuts off further circulation through the apex. So it would seem that the arsenic simply affects the pulp-tissue by irritation at the point of contact, and that the arsenic itself is not carried into the tissue, hence no trace of it can be found except at the point of contact.

The dual meetings at the Park did not come up to the expectations, for not over two hundred were present, and only one from California, which does not look much like an attempt to get the American Dental Association out to the Pacific Coast. New England was never so poorly represented. We hear on all sides, from those who are the best supporters of the American, that too much politics have nearly destroyed its usefulness. However, the exhibit was large and very creditable; it is certainly evident that mouth-washes are clamoring for recognition.

It was truly a gracious thing to re-elect Dr. Crawford for another year, particularly as at the time of election he was very sick, we are sorry to say, seriously so. We, together with his many friends, trust that ere this is published we shall hear that he is himself again.

Asbury Park is a notably "dry" place; the water is all salt. In a small room at the Columbia we noticed on a table a large num-

ber of bottles filled with liquids; possibly this was a formula adopted by the State Society for the mouth. We met a colored gentleman going in with an old demijohn and his face was all aglow, looking as though he had been promised a watermelon if he would be very faithful to the initiated. For further particulars attend the next meeting of the Northern New Jersey Society and all mysteries will be made clear. Cordially, M. A. G.

SOME ENCOURAGING LETTERS.

BROOKLYN, July 30, 1895.

To the Editor of Dental Digest:

DEAR DOCTOR:—The DIGEST for July duly received. The first six lines on Page 387 are worth one hundred dollars to every young member of our profession. And many of our older practitioners would do well to cut them out, and then read them every time a peddler comes in to sell them something 'on tick.' Wish-you every success, I remain sincerely yours,

M. P. BEECHER.

NORTH SAN JUAN, Cal., May 19, 1895.

To the Editor of the Dental Digest:

DEAR DOCTOR:—Recently I saw you quoted as follows in a discussion on pulpless teeth: "If a patient returned to me with a swollen face, I would not know how to apologize," or something to that effect. Do you mean to say that in all your long and extensive practice you have never had any failures in root-canal filling? If so, I should very much desire your method of operation.

I am young in dentistry (five years), but thought I was doing pretty well in root-canal filling until I saw you quoted. I have lost three in my entire practice, one chronic abscess, and two filled immediately after pulp was removed. The last one was filled May 5, and the patient came back today having a well-developed abscess. The other immediate-filled root after pulp extirpation was in the same family. I think their constitutions, etc., are favorable to abscesses. I think it is better to wait until all soreness and inflammation subside before filling, even in immediate and

healthy pulp extirpation. I am confined to the "wild and woolly" mining camps of the Sierras, and cannot keep in touch with the foremost, except through journals. But nevertheless, I aim to do good work and to progress.

I am well satisfied with the Dental Protective Supply Co., and with their goods. The DIGEST is also very good. I have been amused at some of the "kicking" letters you have published. That is the great trouble and drawback in our profession—too many bosses and kickers.

When I was a student at the B. C. D. S., in Baltimore, Prof. R. B. Winder gave us his views concerning you and the Dental Protective Association, and further added in his forcible way, "It is the greatest boon on earth for American dentists, and every one of you ought to join it." He was a great operator, a rare teacher, and never failed to spot a good thing when he saw it. He has now passed into the Great Unknown where we trust he has no need of Protective Associations. But I took his sage advice, joined the Association with the first ten dollars earned at the chair after I began practice, put one hundred dollars into the Supply Co., and subscribed for the DIGEST, and am not sorry for any of these acts. Yours truly,

I. B. ARCHER.

SING SING, N. Y., July 22, 1895.

To the Editor of the Dental Digest,

DEAR DOCTOR:—The DENTAL DIGEST comes as a welcome guest and valuable counsellor to my office. It is like its editor, a God-sent benefactor to our profession. Those who are young in the ranks, and know little or nothing of the oppression of the past, may not appreciate the noble victories you have won, but those who are honest and true to their deeper convictions will not fail to recognize them. Do not expect much appreciation, for those who have given the most self-sacrificing labor for the good of men have often fared the worst. Why? Because there are some men with souls "so small that ten thousand of them might be rattled in a peanut shell, or on a needle's point might race and ne'er be cramped for space." May God continue to be your inspiration and to speed you on. I remain, very sincerely,

WM. M. FANCHER.

SPENCER, Iowa, July 18, 1895.

To the Editor of the Dental Digest,

DEAR DOCTOR:—I want to assure you of my entire sympathy in this D. P. A. business, and I think the profession generally are with you. The man who would criticise or withhold his active co-operation in this struggle *deserves* to have the halter about his neck that the Patent Fiends would place there. Success to you and the DIGEST. Fraternally yours,

CHAS. W. CRAWFORD.

CHICAGO, June 15, 1895.

To the Editor of the Dental Digest,

DEAR DOCTOR:—Many thanks for sending me the DIGEST right along in spite of my neglecting to send you the subscription before this. I assure you that my delay was not in any way due to a lack of appreciation of your journal, as it is today one of my greatest helps. I am quite sure that those who read it once will wish it always. It gives a fair and splendid resume of all that is worth reading in the various dental journals in such a concise manner that I feel greatly indebted to its editor for having started such a helpful journal. I assure you of my best wishes for your journal's success. Very truly,

H. H. SCHUHMAN.

A CASE OF FOOT AND MOUTH DISEASE IN MAN.—Schever (*Dermatologische Zeitschrift*) reports an instance of the transference of this disease to man. After briefly reviewing the literature of the subject, the author reports the following case: A laborer, 43 years old, was employed in taking care of cattle affected with foot and mouth disease. Two weeks before coming under observation he was compelled to give up his work, having moderate fever, angina, headache, and constipation. About the same time an eruption appeared upon the upper lip and the hands. This eruption appeared as vesicles filled with a sero-purulent fluid. At the time of observation these had disappeared, being replaced by pale-violet nodules, some of which were slightly scaly, others exuded a small quantity of serum from small erosions on their summits. These lesions were not painful nor sensitive to pressure. Lymphangitis and swelling of the axillary glands accompanied the eruption. Upon the upper lip was a hard lesion covered with a bloody crust. This was, like the others, painless. In most of the lesions healing took place with the formation of smooth scars; but in a few instances wart-like growths formed, under which healing occurred later.—*University Medical Journal*.

The Dental Digest.

PUBLISHED THE

TWENTIETH DAY OF EVERY MONTH.

Editorial.

THE MEETINGS AT ASBURY PARK.

Included in which were the National Board of Dental Examiners, the College Faculty Association, The National Association of Dental Technics, the Dental Protective Association, and, including them all, the American Dental Association. Taken together these meetings which have just closed, may be regarded as the most important ever held, as they all show a decided advance in the right direction.

One great improvement over former years was that most of the associations either met long enough before the American, or at such times during the session that most of their work was done without interfering with the main meeting. Furthermore, we understand that they are arranging to have all their work completed next year before the time for convening the American.

The proceedings show better work, and there was much more valuable material from which to prepare reports than ever before. However, the reports of the different sections showed a lack of proper preparation in the sections before presentation to the meeting. Too much crude material was brought in without proper condensation. A step towards remedying this was taken in the form of a resolution instructing the executive committee to prepare the next program so that the sections should work a greater part of each day, and then have one general daily meeting, thus giving the rest of the time to section work. We believe this will make the results much more valuable and creditable.

The attendance was not so large as a meeting held in such an accessible place should be. There are many active workers in the profession who, for some reason unknown to us, take no inter-

est in these meetings, little realizing the influence these important organizations exert, and how much the future of the dental profession is dependent upon them. We regard this as very unfortunate, as the usefulness of the meetings would be much increased by their co-operation, and on the other hand, those who remain away do themselves a great injustice, for we take the position that practitioners generally cannot afford to lose the inspiration gained at these annual meetings. If those who should be there, yet are not, would explain why they do not attend, perhaps the difficulty could be removed. We have sometimes thought that the time of meeting might be bad, as many practitioners take their vacations just about that time, and they feel that they must have the rest. If it is the general feeling that some other season of the year would be productive of a fuller attendance, that sentiment should be expressed.

The illness of Pres. Crawford, who was sick during the entire session, cast a feeling of sorrow over the gathering. However, he was re-elected, and we hope that next year he will not be so unfortunate.

One feature which was very detrimental to the success of the meetings was that the hotels were not nearly able to accommodate all the guests, consequently, the dentists were so scattered that it was almost impossible to find anyone you wished, except during the sessions. The lack of one large hotel where all the delegates could be together, was probably the greatest drawback. Otherwise, the accommodations were good, and the members of the New Jersey State society, who made themselves responsible for the entertainment of the visitors, did their part well and deserve great praise.

THE DENTAL PROTECTIVE ASSOCIATION.

The meeting of prominent members of the Protective Association at Asbury Park was in the nature of a council of war. It was called because we were uncertain whether the members wished this to be a permanent organization, or thought it best to end the present litigation and then disband the Association.

After a reasonably full explanation of what the Association had done, its membership, the state of its finances, and what was yet to be accomplished, the members present, without a dissenting voice, agreed that it would be very detrimental to disband, and that the organization must be put on a more permanent basis. This feeling was emphasized when facts which have never been made public were stated, to the effect that there were numerous corporations and combinations now kept in check by the Association, and that if it were given up they would be an annoyance to the dentists not yet realized. Especially, as the dental profession as a whole are the easiest kind of prey for patent vampires and others who wish to get part of our earnings without giving any real equivalent.

The sentiment was very unanimous that it was proper and right that an effort should be made to take the protection away from those not joining with us. Up to this time the Protective Association has freed the whole profession from patent abuse by different companies claiming royalty, and the work has been supported by a fraction of the profession. This is manifestly unfair and unjust, and is very demoralizing to those who receive such benefits, yet pay nothing for them.

This meeting was the most hopeful and encouraging sign we have seen since the Association was organized. The active interest felt in the matter took definite shape when a committee was appointed to draft an appeal to all the members, asking for united co-operation to get all the decent members of the profession now outside the Association to join in this movement. The report of this committee's work will soon be in the hands of the members.

LETTERS OF ENCOURAGEMENT.

We have published from time to time some letters criticising these reform movements. In this issue we publish a few out of a great many letters of commendation that are constantly being received by us, and especially praising the DIGEST. Many of these are from members of the profession outside the Protective Association, and we just mention here that this reflects a little on those

members of the Association who have not yet subscribed. We do not publish these letters because they praise us individually, but because we wish to show that there are some members of the dental profession who understand and appreciate what we are trying to do, and who are willing to give their active support.

METHODS OF DENTAL JOURNALISM.

As we get older in this work perhaps we shall not be so surprised at the existing methods of journalism in dentistry, but just at present we are puzzled by the lack of what we had supposed existed, viz., journalistic courtesy. We frequently make a digest of an article and then find that the article was published some time before in a different journal from the one we are reviewing. Or, we make a digest of an article and then see that same article run through four or five journals in the next month or two. In many instances no credit is given to the journal which first published the article, so that a journal may appear to have much original matter, when in reality almost every article has appeared before elsewhere. We speak of these things simply by way of inquiry, as we wish to know if it is not customary to give credit for articles, items, and titles, and to tell from where they are taken.

Notices.

FIRST DISTRICT DENTAL SOCIETY OF ILLINOIS.

The First District Dental Society of Illinois will hold its annual meeting at Canton, Ills., Sept. 10, 11 and 12th. An interesting program has been prepared.

W. O. BUTLER, LaHarpe, Sec'y.

MINNESOTA STATE DENTAL ASSOCIATION.

The Minnesota State Dental Association will hold its annual meeting in St. Paul, Sept. 11, 12 and 13th, 1895. The executive committee has arranged an interesting program. A cordial invitation is extended to the profession in this and other states.

H. L. CRUTTENDEN, Northfield, Sec'y.

AMERICAN COLLEGE OF DENTAL SURGERY.

The American College of Dental Surgery of Chicago moved last May from its quarters on Wabash Ave. to a more commodious building in the business centre of the city. While the new quarters were being re-modeled a fire destroyed most of the building; but the property was well insured, and as the workmen had not made much progress, the loss is not heavy. The winter session will open early in October.

News Summary.

PERSONAL.—Dr. L. P. Bethel, editor of the *Ohio Dental Journal*, has been elected to the faculty of the Western Reserve University Dental Department.

TO SECURE RUBBER DAM.—A year or so ago Dr. Hetrick gave a hint as to the value of sandarach varnish to secure rubber-dam to the teeth, instead of the painful silk ligature. It was one of the most valuable items I ever received, and if it has not been universally adopted it should be.—*Dr. Bergstresser in Dental Office and Laboratory.*

We, as well as many others, have used this method for some years.—Ed Digest.

TO REMOVE RUBBER FROM TEETH.—A simple and easy method of abstracting and cleaning the teeth from vulcanite rubber is, first put the teeth in dry plaster on an iron spoon, covering the teeth with it. Place the spoon with its contents in the fire and let it remain till the plaster becomes red-hot, then withdraw the spoon from the fire, leaving it to cool, which occurs almost immediately. Then remove them from the plaster, and the teeth will be found to be perfectly clear and uninjured, as when received from the manufactory. I have also used this method with vulcanite mounted cases of two and three teeth. No trace whatever of any rubber adhering to the teeth. The teeth also become firmer by being annealed.—*Dr. Bernhard, Bath, England.*

A STEP IN ADVANCE.—The following agreement was submitted to and signed by every member of the last graduating class of the Michigan University Dental College. The faculty will in the future ask each graduate to sign it: "To maintain the dignity and to further the honor of the profession which I am entering, and in loyalty to my Alma Mater and the desires and precepts of its faculty, I, the undersigned, willingly and cheerfully promise to abide by the 'code of ethics' of the American Dental Association. I will strive to deport myself in such manner as to claim the respect of the public, the good-will of my co-workers in the profession and the continued esteem of my instructors and fellow-graduates. If at any time I should fail to so act, I shall expect to forfeit all claims to personal or professional recognition by my Alma Mater and class-mates."